Ingersoll-Rand

GENERAL PARTS LIST SECTION BREAKDOWN

GENERAL PARTS LIST SECTION BREAKDOWN

SECTION #	SECTION TITLE
Word Index	ALPHABETICAL INDEX
CPN Index	PART NUMBER INDEX
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1.0	GENERAL ASSEMBLY
2.0	MAINFRAME ASSEMBLY
3.0	TRACK ASSEMBLY
4.0	BOOM ASSEMBLY
5.0	DRILL GUIDE ASSEMBLY
6.0	ENCLOSURE ASSEMBLY & COMPONENTS
7.0	ENGINE ASSEMBLY – POWER PACK SYSTEM
8.0	AIR SYSTEM – HOSING AND COMPONENTS
9.0	HYDRAULIC SYSTEM – HOSING AND COMPONENTS
10.0	DUST CONTROL SYSTEMS – DUST COLLECTOR, VAPOSOLr
11.0	MACHINE LABELS – NAMEPLATE, SAFETY, AND STRIPING
12.0	ELECTRICAL COMPONENTS
13.0	CAB ASSEMBLY
14.0	STANDARD EQUIPMENT
15.0	OPTIONAL EQUIPMENT
16.0	MAINTENANCE SPECIFICATIONS AND SERVICE LIST – TORQUE SPECS, FLUIDS, SERVICE ITEMS, INTERVALS, SPECIFICATIONS
17.0	MACHINE SCHEMATICS – AIR, HYDRAULIC, ELECTRICAL
20.0	HOSING DIAGRAMS

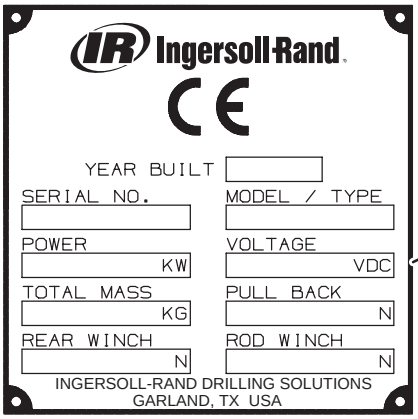
ADDITIONAL MANUALS FURNISHED WITH EACH MACHINE

- INSTRUCTION MANUAL FOR CRAWLER DRILLING MACHINE
  MODEL: CM780D IM6190
- SAFETY MANUAL FOR HYDRAULIC CRAWLER DRILL;
  MODEL: 7OO SERIES SM6189
- PARTS LIST FOR DIRECT DRIVE ROTARY HEAD
  MODEL: DDRH PL6216
- TECHNICAL MANUAL FOR “Quantum Leap®” DOWNHOLE DRILLS
  MODEL: QL SERIES TM6121

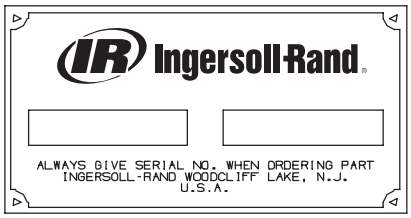
WRITE PRODUCT IDENTIFICATION NUMBERS

Accurately record all the numbers. Always use the serial number of the machine when requesting service information or when ordering parts. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use a different procedure in doing a specific service operation.

MACHINE: _____-



FOR CE MACHINES



FOR ASME MACHINES

Figure 1. Serial Number Location

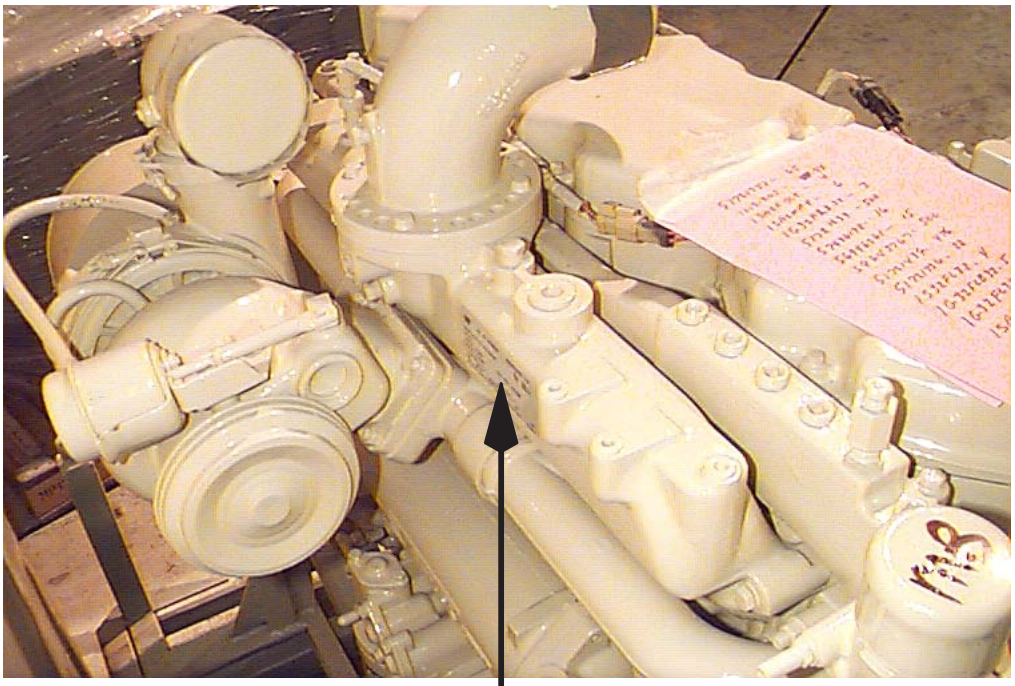
NOTE: References to the right-hand side and left-hand side of the machine are made looking from the main frame end toward the drill end.

NOTICE

All information, illustrations, and specifications in this manual are based on the latest information available at the time of publication. Product improvement is a continuing goal at Ingersoll–Rand®. Design and specifications are subject to change without notice or obligation.

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

WRITE PRODUCT IDENTIFICATION NUMBERS

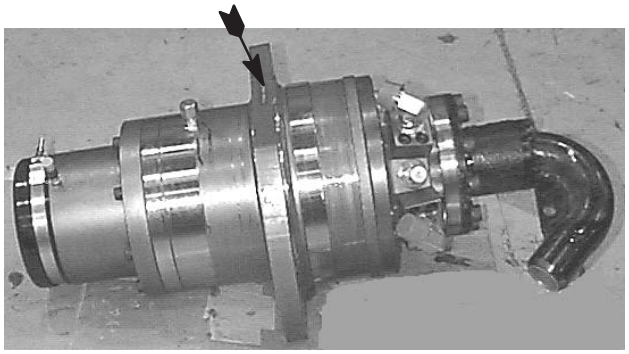


ENGINE: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

WRITE PRODUCT IDENTIFICATION NUMBERS

ROTARY HEAD:_____

Serial Number Located In This Area



Model : DDRH ROTARY HEAD

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

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WRITE PRODUCT IDENTIFICATION NUMBERS

IMPORTANT:

The Ingersoll−Rand Distributer/Dealer serving the area in which your equipment is working will be able to give you the BEST and FASTEST SERVICE of Genuine Ingersoll−Rand Replacement Parts.

Continuing Product Improvement and advancement of product design may cause changes to your Rotary Drill which may not be reflected in this Parts/Service Manual. Production models may vary in some detail. Ingersoll−Rand reserves the right to modify or make changes without notice or obligation.

Parts Ordering Instructions

By giving complete information, you will enable us to fill your order correctly and avoid unnecessary delays!

When ordering Replacement Parts, specify:

1. Unit **Serial Number**
2. The **Name** of each part as listed
3. The **Part Number** as listed in your parts book.
4. **Quantity** of parts desired.

Refer all communications concerning this unit to our nearest Branch Office, Distributor, Dealer or Agent

WARNING IN THE MANUAL

CALIFORNIA PROPOSITION 65 INFORMATION

TO CALIFORNIA CUSTOMERS AND
TO CUSTOMERS SELLING DIESEL ENGINE EQUIPMENT
INTO OR FOR USE IN CALIFORNIA

CALIFORNIA
Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

MODIFICATIONS/ALTERATIONS ON THE MACHINE

NOTE: BEFORE WELDING ON A MACHINE WITH ELECTRONIC ENGINE, THE FOLLOWING PRECAUTIONS SHOULD BE OBSERVED:

- TURN THE ENGINE CONTROL SWITCH TO THE OFF POSITION.
- DISCONNECT THE NEGATIVE BATTERY CABLE AT THE BATTERY. TURN THE BATTERY DISCONNECT SWITCH TO THE ON POSITION.
- CONNECT THE WELDER GROUND CABLE DIRECTLY TO THE MEMBER TO BE WELDED. PLACE THE GROUND CABLE CLAMP AS CLOSE AS POSSIBLE TO THE WELD TO REDUCE THE POSSIBILITY OF WELDING CURRENT DAMAGE TO BEARINGS, HYDRAULIC COMPONENTS, ELECTRICAL COMPONENTS, AND GROUND STRAPS. ***DO NOT USE ELECTRICAL COMPONENTS, THE ECM OR ELECTRONIC GROUND STUD FOR GROUNDING OF THE WELDER.***
- PROTECT WIRING FROM WELDING DEBRIS OR SPLATTER.
- USE STANDARD WELDING TECHNIQUES TO WELD THE MATERIALS TOGETHER.

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HOW TO USE THIS MANUAL

PAGE NUMBERING:

- THE PAGE NUMBERING SCHEME OF THIS MANUAL REFLECTS THE SECTION NUMBER FOLLOWED BY A PERIOD, THE SUB-SECTION FOLLOWED BY A DASH, AND THE PAGE NUMBER. (EX. 4.0–1, 4.0–2. ETC.)

WHEN THE *DESCRIPTION* IS KNOWN – USE THE WORD INDEX:

- THE WORD INDEX IS FOUND IN THE FRONT OF THIS MANUAL. THE ITEMS LISTED ARE IN ALPHABETICAL ORDER AND MAY BE REPEATED SEVERAL TIMES DEPENDING ON THEIR FUNCTIONAL DESCRIPTION. AT THE END OF THE PART NAME THE SECTION AND PAGE NUMBER WILL APPEAR. (EX. BACKUP ALARM, 2.1–8)
- IF THE PART CANNOT BE FOUND BY USING THE ABOVE STEP, ANOTHER WAY OF FINDING THE PART IS BY REFERRING TO GENERAL INFORMATION (WHICH IS THE NEXT SECTION IN THIS MANUAL). LOOK AT THE PARTS LIST SECTION BREAKDOWN AND SELECT THE MOST APPROPRIATE SECTION TITLE THAT THE PART YOU ARE LOOKING FOR MAY BE FOUND. THE SECTION NUMBER IS CALLED OUT TO THE LEFT OF THE SECTION TITLE.

WHEN THE *PART NUMBER* (CPN) IS KNOWN – USE THE CPN INDEX:

- IF YOU ALREADY KNOW THE PART NUMBER (CPN) FOR THE ITEM REQUIRED, A CPN INDEX (NUMERICAL ORDER) IS PROVIDED IN THE FRONT OF THIS MANUAL. LOOK UP THE PART NUMBER (CPN) DESIRED AND THE CPN INDEX WILL SHOW THE SECTION AND PAGE NUMBER.

SERIAL NUMBER RANGES:

- WHEN AN ASSEMBLY OR PART IS AFFECTED BY A SERIAL NUMBER CHANGE, THE SERIAL NUMBER WILL APPEAR IN THE SPECIFIC SECTION INVOLVED, AND THE INDEX. (REFER TO PAGE HOW–4 FOR EXAMPLES.)

USING THE PARTS IDENTIFICATION PAGES:

- THE PARTS IDENTIFICATION PAGES CONSIST OF THE PARTS ILLUSTRATION AND THE PARTS LIST.
- THE PARTS ILLUSTRATION SHOWS THE ASSEMBLY WITH ITS COMPONENT PARTS IDENTIFIED BY A REF. NO.
- ON THE PARTS LIST, THE COMPONENTS ARE LISTED IN REF. NO. ORDER. OTHER INFORMATION PROVIDED BY THE PARTS LIST IS THE PART NO. (CPN), THE QUANTITY REQUIRED TO ASSEMBLE THE ASSEMBLY, THE PART NAME, A DESCRIPTION OF THE PART (ON HARDWARE ITEMS), AND ANY OTHER ADDITIONAL NOTES OR REMARKS REQUIRED TO HELP PLACE THE PARTS ORDER.

ORDERING INSTRUCTIONS

When ordering service parts, please specify:

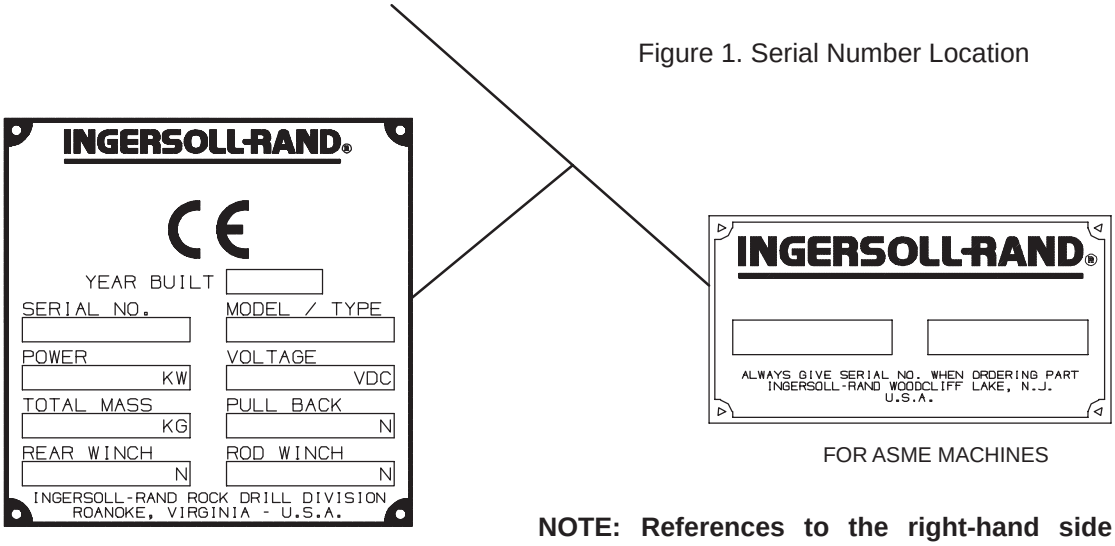
1. The **NAME** of each part as listed.
2. The **PART NUMBER** as listed or stamped on the part.
3. The **SERIAL NUMBER** of the machine. (Refer to Figure 1.)

HOW TO USE THIS MANUAL

DO NOT use the REF. NO. when ordering service parts, use the Part No. and the PART NAME. To save time send all orders for parts to the nearest branch office or agent. IF IT IS NECESSARY TO SEND ANY PART OF THIS MACHINE TO THE FACTORY, INQUIRE AT OUR NEAREST BRANCH OFFICE OR AGENT FOR SPECIAL INSTRUCTIONS. PRODUCT IMPROVEMENT IS A CONTINUING GOAL AT INGERSOLL–RAND. DESIGN AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE OR OBLIGATION.

NOTICE: *When a black bar is seen to the left of any text or graphic, there has been a change or modification made to that particular text or graphic.*

Figure 1. Serial Number Location



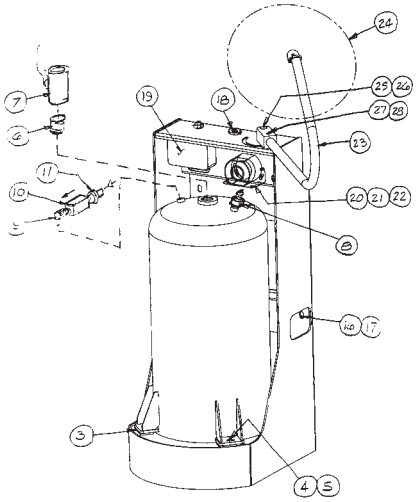
FOR CE MACHINES

FOR ASME MACHINES

NOTE: References to the right-hand side and left-hand side of the machine are made looking from the main frame end toward the drill end.

Ingersoll-Rand

52316171 VAPOSOL® INSTALLATION (ASME) (S/N 00000–00009)



SERIAL NUMBER RANGES, WHEN APPLICABLE

WARNING: This manual contains data SPECIFIC to ECM-710 10.4–1

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SERIAL NUMBER

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

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Ingersoll-Rand

SAFETY INFORMATION

BE AWARE OF SAFETY INFORMATION

This is the Safety–Alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

SAFETY ALERT SYMBOL

UNDERSTAND SIGNAL WORDS

A signal word – DANGER, WARNING, or CAUTION – is used with the safety–alert symbol. DANGER identifies the most serious hazards.

DANGER, WARNING, or CAUTION safety labels are located near specific hazards.

NOTICE labels are for general information.

⚠ DANGER

(RED BACKGROUND)

DANGER IS USED TO INDICATE THE PRESENCE OF A HAZARD WHICH WILL CAUSE SEVERE PERSONAL INJURY OR DEATH IF THE WARNING IS IGNORED.

⚠ WARNING

(ORANGE BACKGROUND)

WARNING IS USED TO INDICATE THE PRESENCE OF A HAZARD WHICH CAN CAUSE SEVERE INJURY OR DEATH IF THE WARNING IS IGNORED.

⚠ CAUTION

(YELLOW BACKGROUND)

CAUTION IS USED TO INDICATE THE PRESENCE OF A HAZARD WHICH WILL OR CAN CAUSE PERSONAL INJURY, OR PROPERTY DAMAGE IF THE WARNING IS IGNORED.

NOTICE

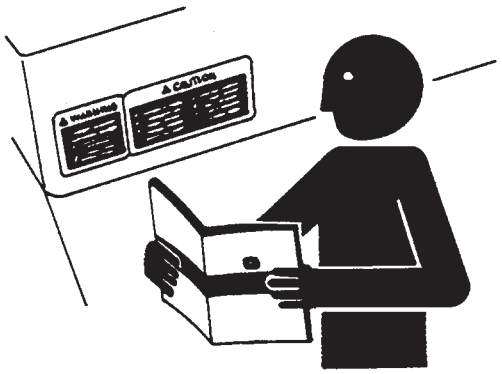
(BLUE BACKGROUND)

Notice is used to notify people of installation, operation, or maintenance information which is important but not hazard related.

SAFETY INFORMATION

FOLLOW INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine's safety labels. Keep safety labels in good condition. Replace all missing or damaged safety labels.



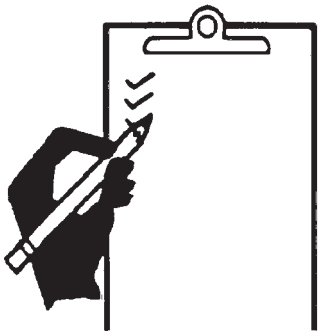
Replacement safety labels can be obtained at no cost from your local Ingersoll–Rand dealer or representative or by contacting the factory.

Learn how to operate the machine and how to use the controls properly. **DO NOT LET ANYONE OPERATE THIS MACHINE WITHOUT PROPER INSTRUCTION.**

If you do not understand any part of this manual and need assistance, contact your local Ingersoll–Rand dealer.

KEEP MACHINE IN GOOD WORKING CONDITION

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and effect machine life.

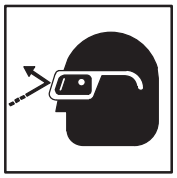


Make sure all safety devices, including shields are installed and functioning properly.

Visually inspect the machine daily before starting the machine. Do not operate the machine with loose, worn, or broken parts.

WEAR PROTECTIVE CLOTHING

Wear APPROVED safety equipment (safety shoes, safety glasses, hearing protection, hard hat, gloves, respirator, etc.) when operating or maintaining the machine.



Safety Glasses

Hard Hat

Ear Protection

Wear close fitting clothing and confine long hair.

Operating equipment requires the full attention of the operator. Do not wear radio or music headphones while operating the machine.

Electrically Insulated Gloves

Respirator

Electrically Insulated Boots

SAFETY INFORMATION

HANDLE FUEL SAFELY – AVOID FIRES

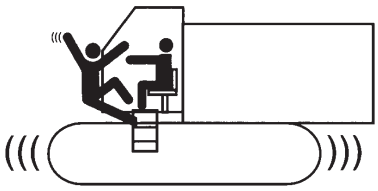
Handle fuel with care, it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fire by keeping machine clean of accumulated trash, debris, and grease. Always clean up spilled fuel.

KEEP RIDERS OFF MACHINE

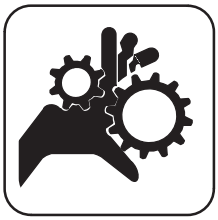
Never ride on a machine. The operator's cab is for one person only. Riders are subject to injury such as being thrown off the machine.



AVOID MOVING PARTS

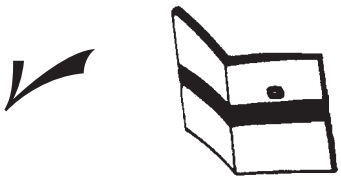
Keep hands, feet, and clothing away from power driven parts.

Keep safety shields in place and properly secured.



CHECK LAWS AND REGULATIONS

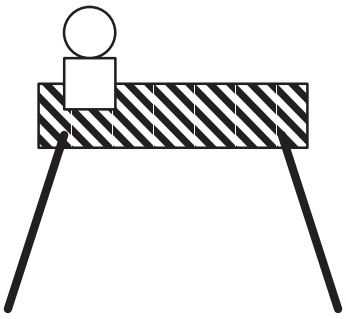
Know and obey all Federal, State, and local laws and regulations that apply to your work situation.



PLACE WARNING BARRIERS AROUND WORK SITE

Set up traffic barriers around the work area with warning signs facing outward.

Place pedestrian and traffic barriers around the job site in accordance with Federal, State, local, and governing agency laws and regulations.



CHECK FOR UNDERGROUND UTILITY LINES

Before starting work, remember that contact with buried utilities may cause serious injury or death. Electric line contact may cause electric shock or electrocution. Gas line contact may rupture pipe causing explosion or fire. Fiber optic cables can blind you if you look into the laser light in them. Water line rupture may cause a flood and possible ground collapse. Before drilling, check with qualified sources to properly locate all buried utilities in and around drill path. Select a drill path that will not intersect buried utilities. Never launch a drill bit on a path toward electric, gas, or water lines. Until their location is known, have the utility company shut it off before starting any underground work. Excavate to confirm its exact location.

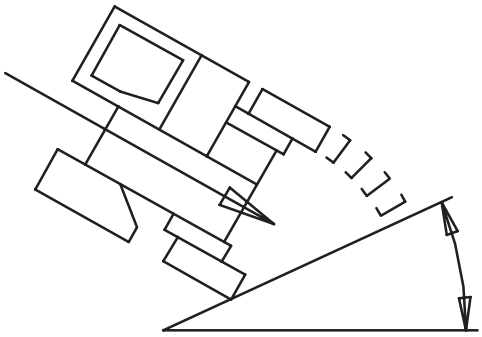
DO NOT WORK ON OR NEAR UNSTABLE GROUND

Do not work in trenches with unstable sides which could cave in. Do not work near faces or walls that can collapse. Do not work near benches that can collapse. Specific requirements for shoring or sloping trench walls, faces, and benches are available from several sources including Federal and State O.S.H.A. offices, or appropriate governing agency. Be sure to contact suitable authorities for these requirements before working in a trench. Federal O.S.H.A. regulations can be obtained by contacting the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. State O.S.H.A. regulations are available at your local state O.S.H.A. office, or appropriate governing agency.

ROLLOVER POSSIBLE

Proceed slowly; be alert and use extreme caution when operating on hillsides, or near ditches, gullies, holes, or obstructions where rollover could occur.

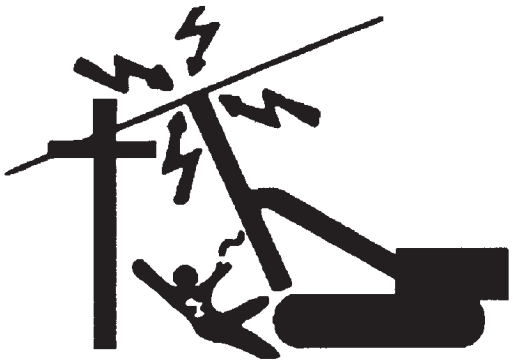
Refer to Stability Chart in cab for specific information on rollover angle data.



WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

SAFETY INFORMATION

AVOID ELECTROCUTION. STAY AWAY.



Electrocution possible. Serious injury or death may result if the machine strikes an energized powerline. Take the following precautions to prevent electrocution. Also refer to the operating instructions.

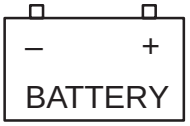
- Always contact your local utility company when working in the vicinity of utilities.
- Locate underground utilities by qualified persons.
- Do not raise, lower, or move drill guide or boom near power lines.
- Always wear proper electrically insulated lineman's gloves and boots.
- Never touch metal parts on machine while standing on bare ground if machine comes in contact with a powerline.
- Always stay in cab during all drilling operations.
- Never step onto or off of a machine if an electric strike occurs.

AVOID COOLANT BURNS

Hot fluid under pressure can erupt and scald if opened.

Allow to cool before opening.

AVOID BATTERY BURNS AND EXPLOSION

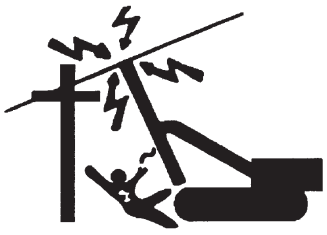


Battery contains sulfuric acid which can cause severe burns. Avoid contact with eyes, skin, and clothing.

Battery fumes are flammable and can explode. Keep all burning materials away from battery. Do not smoke. Tools and cable clamps can make sparks. Shield eyes and face from battery.

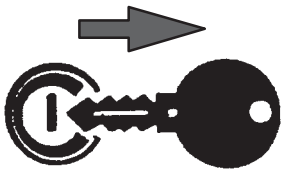
CHECK FOR OVERHEAD UTILITY LINES

Check for overhead electrical power lines or other obstructions and be certain there is adequate clearance when handling drill rod or moving machine.



USE NORMAL SHUTDOWN PROCEDURE

Before servicing, cleaning, repairing, inspecting, lubricating, fueling, or transporting the machine, make sure the machine has been shutdown in accordance with this instruction manual.



WHEN TRANSPORTING ON TRUCK OR TRAILER

Attach chains and binders to the machine to securely tie down the machine to the truck or trailer. Refer to LIFTING POINTS in Section 2 for proper location.

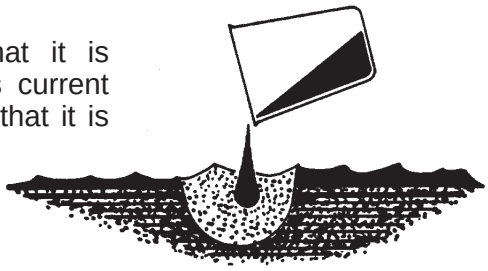
OBSERVE ENVIRONMENTAL PROTECTION REGULATIONS

Be mindful of the environment and ecology.

Before draining any fluids, find the correct way of disposing them.

Observe the relevant environmental protection regulations when disposing of oil, fuel, coolant, brake fluid, filters and batteries.

When using any solvent to clean parts, make sure that it is nonflammable, that it will not harm the skin, that it meets current O.S.H.A. standards, or appropriate governing agency. And that it is used in an area that is adequately ventilated.



WARNING: Failure to follow any of the above safety instructions or those that follow within this manual, could result in serious injury or death. This machine is to be used only for those purposes for which it was intended as explained in this instruction manual.

SAFETY DECALS

INSPECTING SAFETY DECALS

Safety decals located on your machine contain important and useful information that will help you operate your equipment safely.

To assure that all decals remain in place and in good condition, follow the instructions given below:

Keep decals clean. Use soap and water, not mineral spirits, abrasive cleaners, or other similar cleaners that will damage the decal.

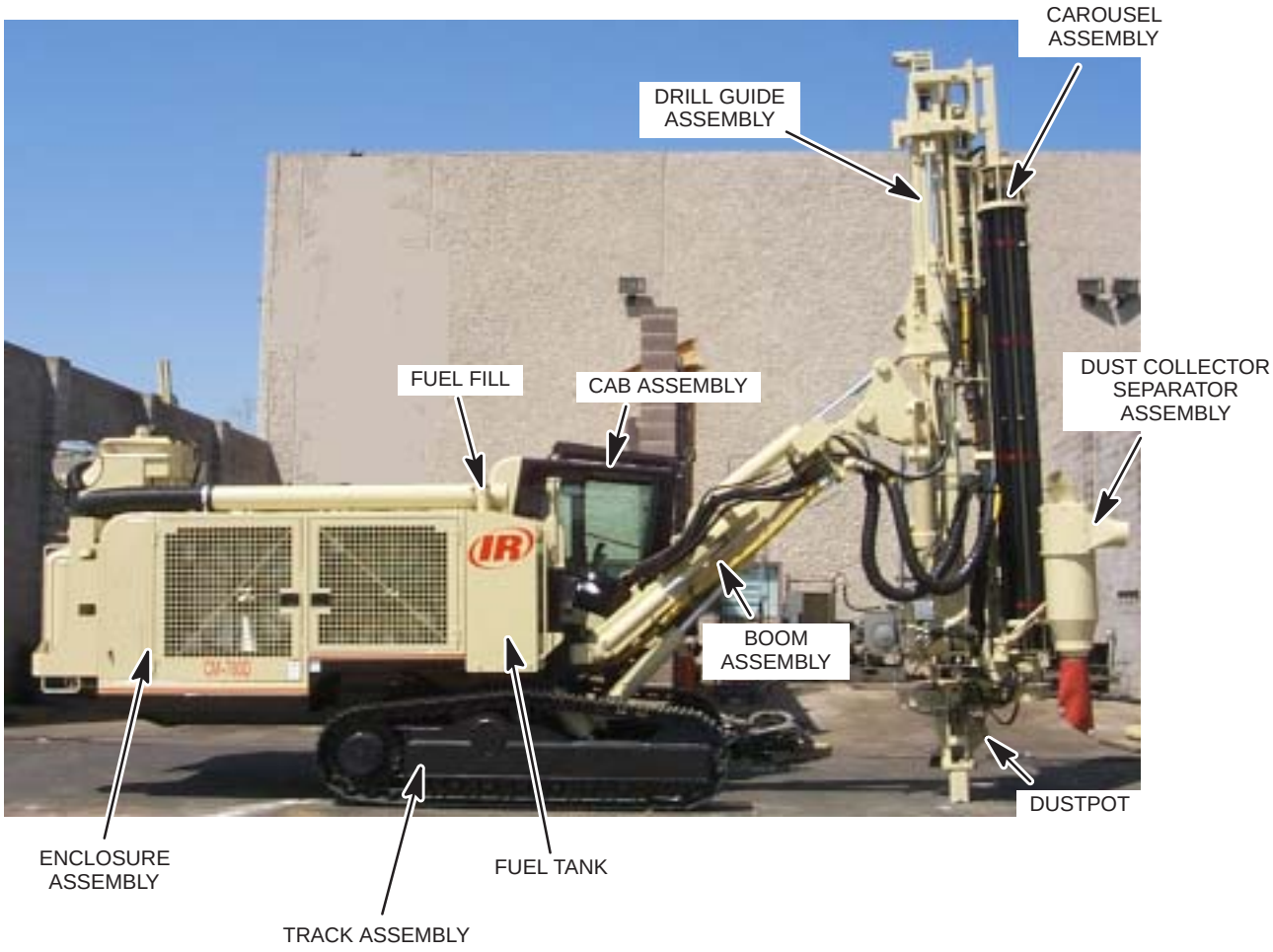
Replace any damaged or missing decals. When attaching decals, surface temperature of the metal must be at least 40ºF (5ºC). The metal must also be clean and dry.

When replacing a machine component with a decal attached, replace the decal also. (Decals part numbers and locations on the machine are shown in the safety manual located inside the operator's cab door pocket.)

Replacement decals can be obtained at no cost from your local Ingersoll–Rand dealer or representative or by contacting the factory.

If you do not understand any part of this manual and need assistance, contact your local Ingersoll–Rand dealer.

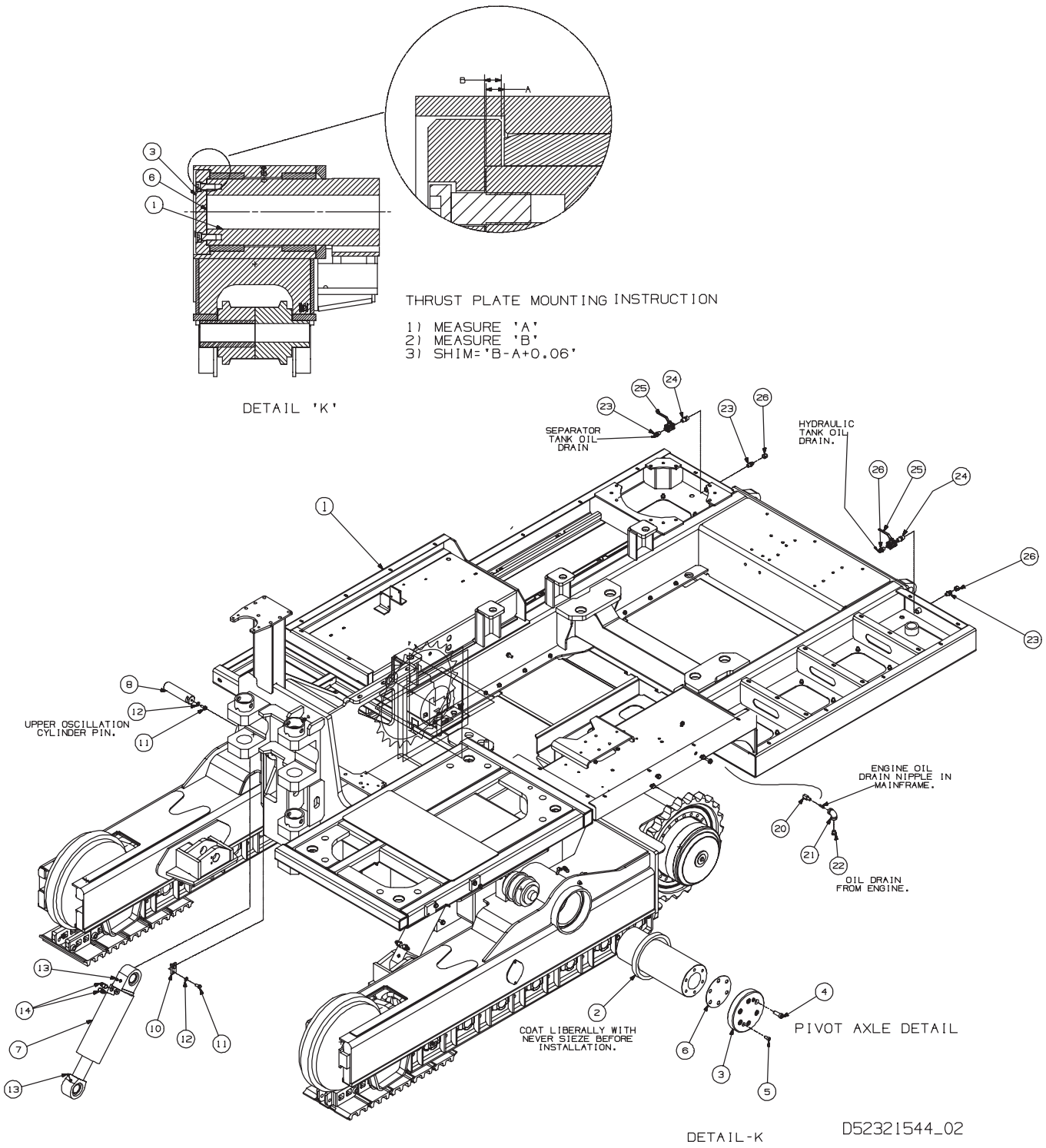
GENERAL ASSEMBLY



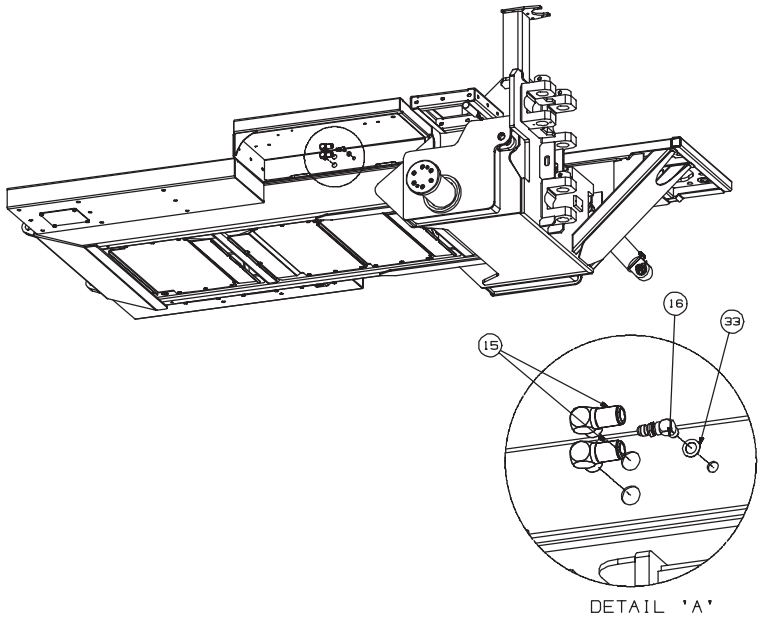
GENERAL ASSEMBLY

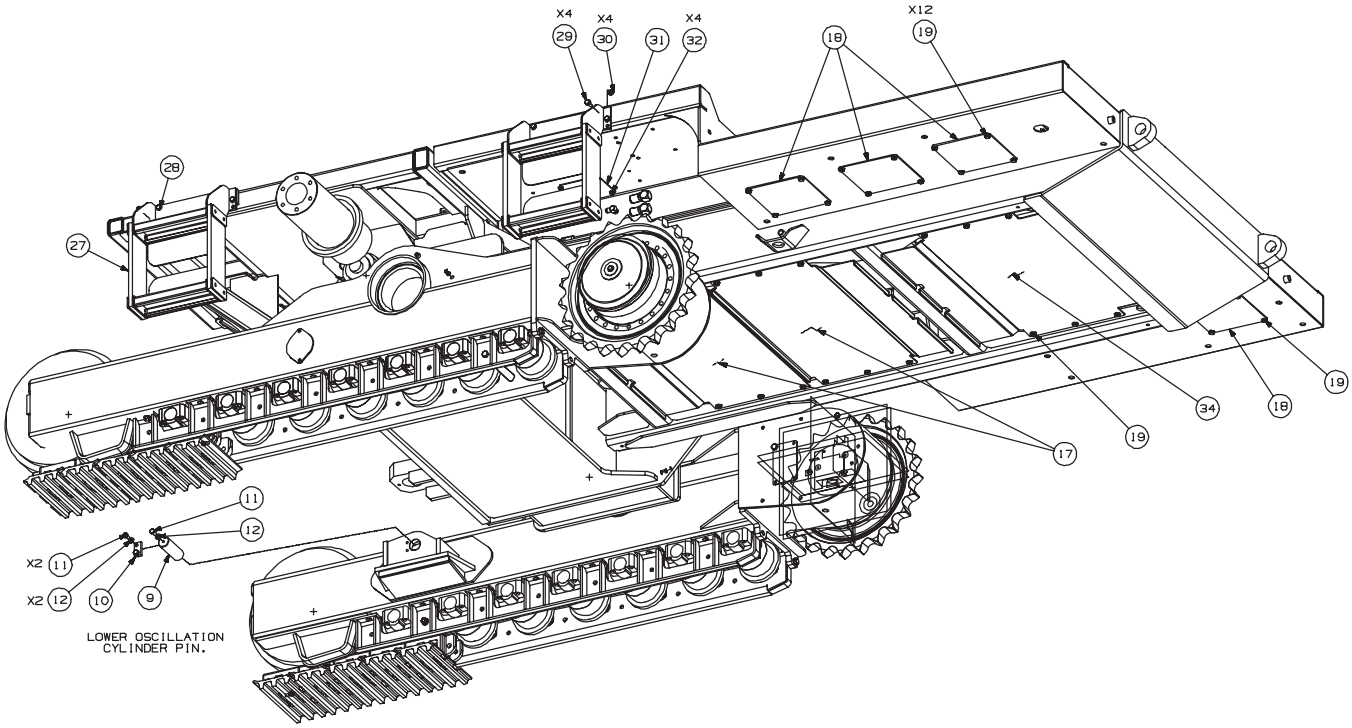
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52321544 MAINFRAME ASSEMBLY



52321544 MAINFRAME ASSEMBLY



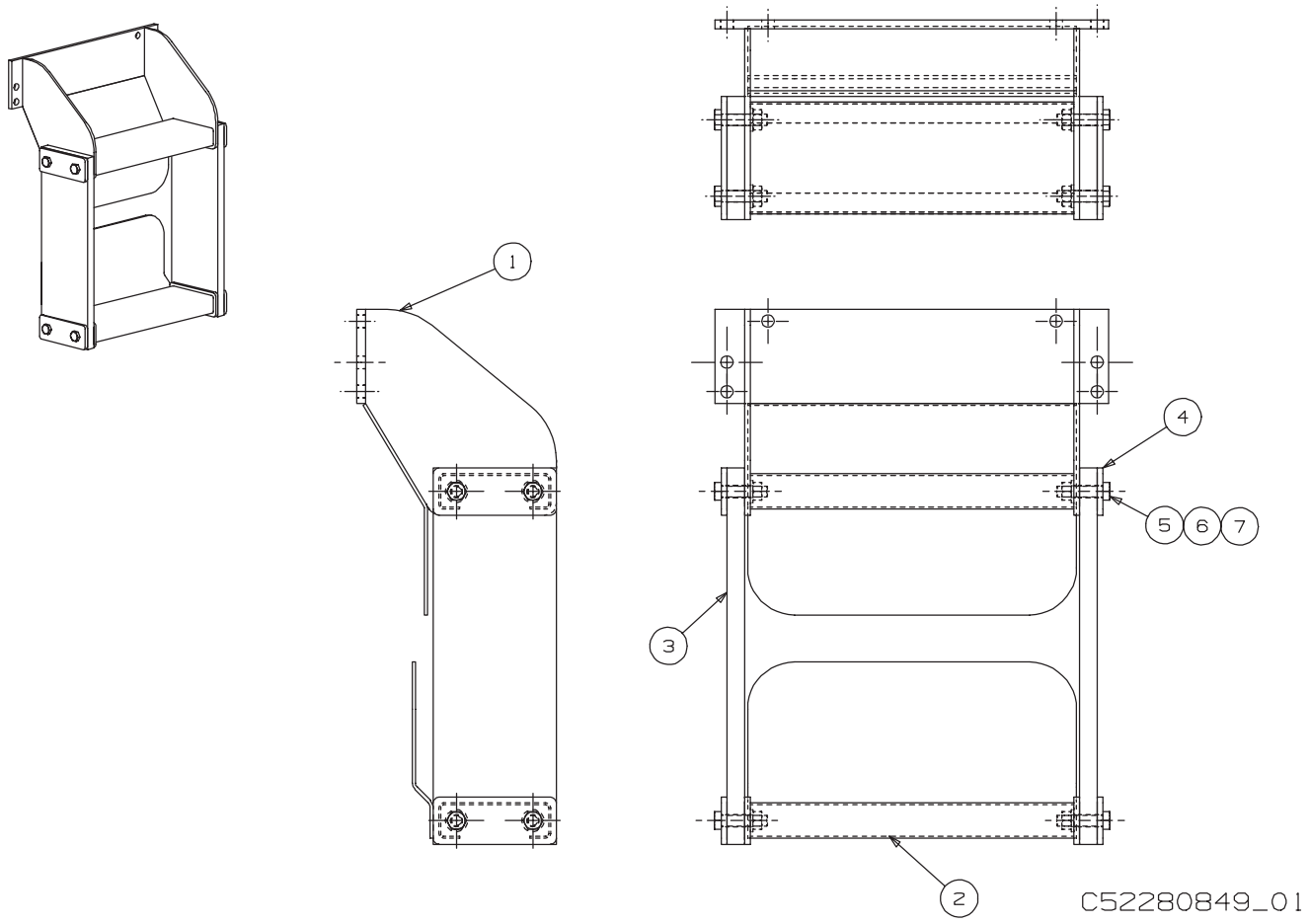


Ingersoll-Rand

52321544 MAINFRAME ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52321510	1	MAINFRAME (WELDMENT)	
2	52134863	2	PLATE, BEARING	
3	51607992	2	PLATE, THRUST	
4	96703095	12	CAPSCREW, SOC. HD.	
5	96714837	4	CASPCREW, SOC, HD.	
6	52314945	2	PACK, TRACK PIVOT AXLE SHIM	
7	51992303	2	CYLINDER, OSCILLATON	
	51992410	2	.KIT, SERVICE	
8	51607984	2	PIN, OSCILLATION CYLINDER (UPPER)	
9	51616399	2	PIN, OSCILLATION CYLINDER (LOWER)	
10	51609089	4	PLATE, KEEPER	
11	96701495	12	CAPSCREW, HEX. HD.	
12	96702535	12	WASHER, FLAT	
13	95201281	4	FITTING, GREASE	
14	95329975	4	ADAPTER	
15	95278974	4	FITTING, BULKHEAD	
16	95278966	2	FITTING, BULKHEAD	
17	52313806	2	PLATE, COVER	
18	52304706	4	PLATE, COVER	
19	96727177	34	BOLT, FLANGED HD.	
20	95464160	1	ADAPTER	
21	95341020	1	ADAPTER	
22	95200333	1	PLUG, PIPE	
23	95219721	4	ADAPTER	
24	95315214	2	ADAPTER	
25	50947357	2	VALVE, ENGINE OIL DRAIN BALL	
26	50996313	2	CAP	
27	52280849	2	STEPS, OPERATOR CAB	
			REFER TO PAGE 2.1–1	
28	96727250	4	BOLT, FLANGED HD.	
29	96727177	4	BOLT, FLANGED HD.	
30	96726815	4	LOCKNUT, FLANGED HD.	
31	52316627	1	PLATE, PAJ VALVE MOUNTING COVER	
32	96727169	4	BOLT, FLANGED HD.	
33	95201448	2	LOCKWASHER	
34	52321536	1	PLATE, COVER	

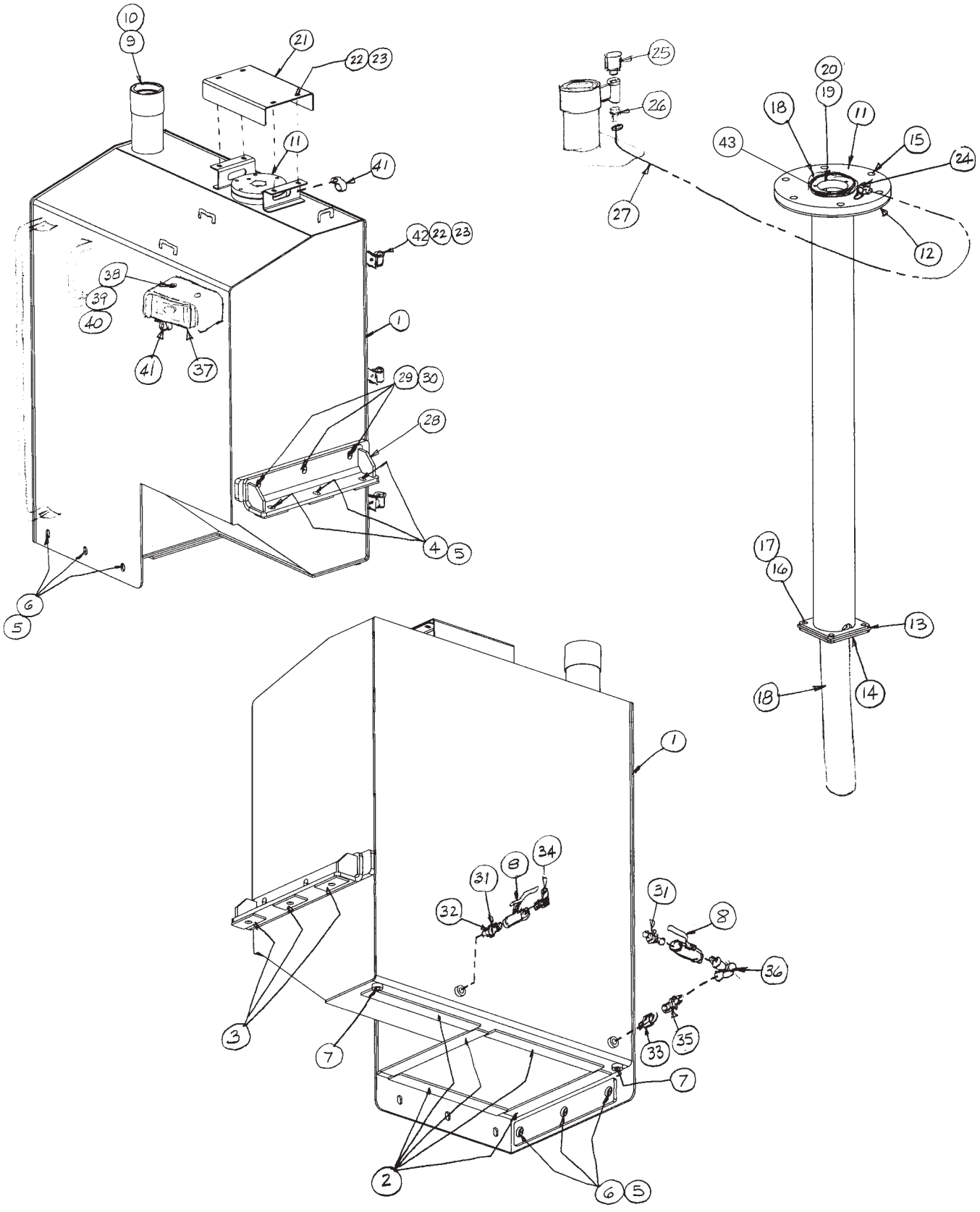
52280849 OPERATOR'S CAB STEPS



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52280856	1	TOP WELDMENT, STEP	
2	52280864	1	BOTTOM WELDMENT, STEP	
3	52280880	2	RUBBER, STEP	
4	52280872	4	PLATE	
5	96711890	8	CAPSCREW, HEX	
6	96701412	8	WASHER, PLAIN	
7	51862852	8	LOCKNUT	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52313590 FUEL TANK ASSEMBLY



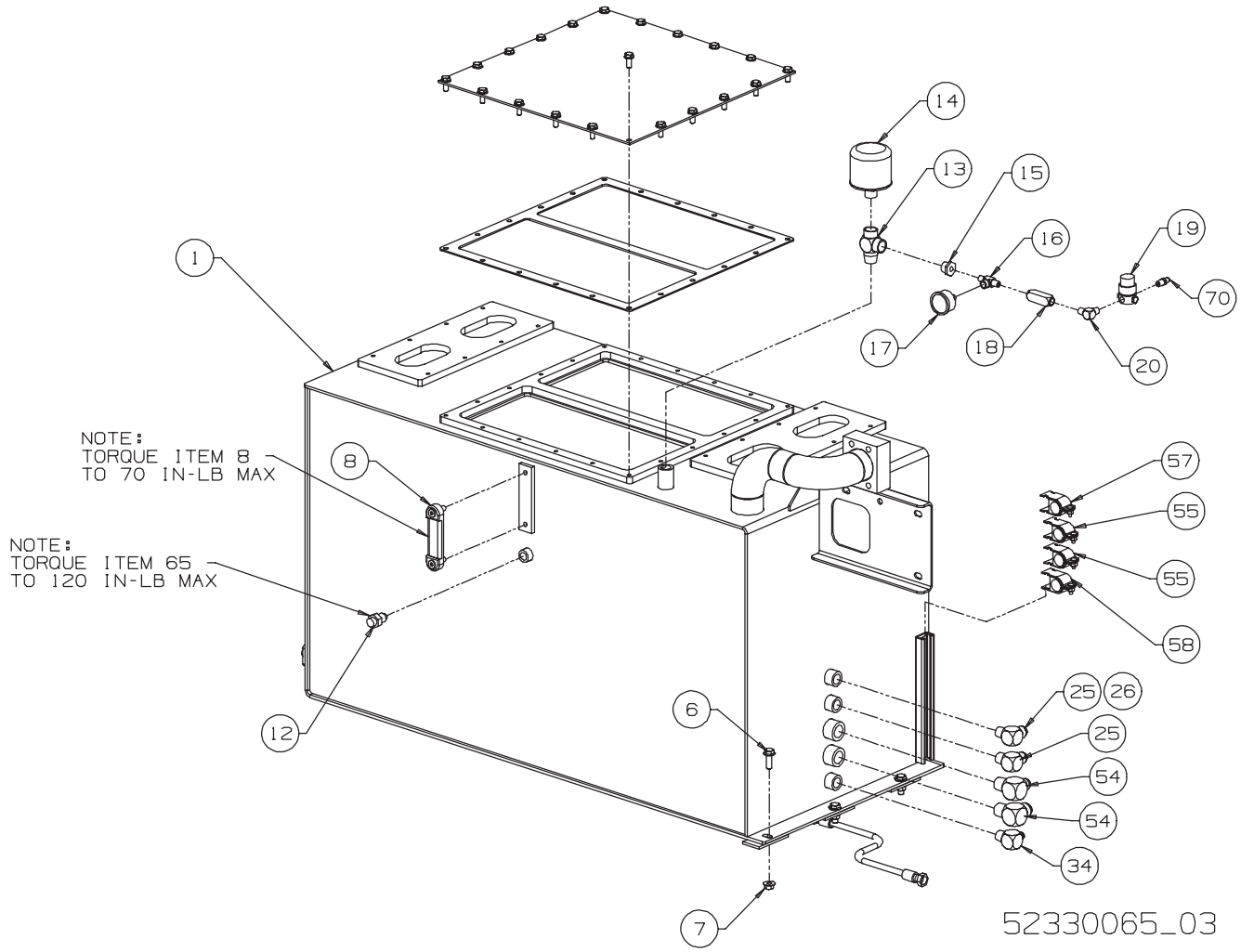
52313590 FUEL TANK ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52313848	1	TANK, FUEL	
2	51619377	5	STRIP, ISOLATOR	
3	52104767	3	STRIP, ISOLATOR	
4	96727557	3	BOLT, FLANGED HD.	
5	96726831	9	LOCKNUT, FLANGED HD.	
6	96727391	6	BOLT, FLANGED HD.	
7	95323465	2	PLUG, PORT	
8	50947357	2	VALVE, BALL	
9	52093325	1	STRAINER, FUEL	
10	52313640	1	CAP, FUEL	
11	52313673	1	TUBE, SUPPORT	
12	52313863	1	GASKET, FUEL LEVEL FILL TUBE	
13	52313871	1	ISOLATOR, SENDER	
14	52313889	1	RETAINER, ISOLATOR	
15	96727003	6	BOLT, FLANGED HD.	
16	96728571	4	BOLT, FLANGED HD.	
17	96726781	4	LOCKNUT, FLANGED HD.	
18	52313855	1	SENDER, FUEL LEVEL	
19	96705736	5	SCREW, HEX. HD.	
20	96702493	5	WASHER, FLAT	
21	52313897	1	COVER, TUBE SUPPORT	
22	96727169	4	BOLT, FLANGED HD.	
23	96726807	4	LOCKNUT, FLANGED HD.	
24	95293403	1	ADAPTER	
25	57594426	1	BREATHER, FUEL TANK	
26	95263380	1	ADAPTER	
27	57101438	1	ASSEMBLY, HOSE	
28	52316155	1	BRACKET, FUEL TANK MOUNTING	
29	96703178	3	BOLT, HEX. HD.	
30	96702550	3	WASHER, FLAT	
31	95219721	2	ADAPTER	
32	95209870	1	O–RING	
33	51618072	1	ADAPTER	
34	95279535	1	ADAPTER	
35	95315214	1	ADAPTER	
36	95264891	1	ADAPTER	
37	51992535	1	HORN, FORWARD WARNING	
38	96726435	2	BOLT, HEX. HD.	
39	96702519	2	WASHER, FLAT	
40	96726799	2	LOCKNUT, FLANGED HD.	
41	95301842	2	CLAMP, VINYL	
42	95301867	3	CLAMP, VINYL	

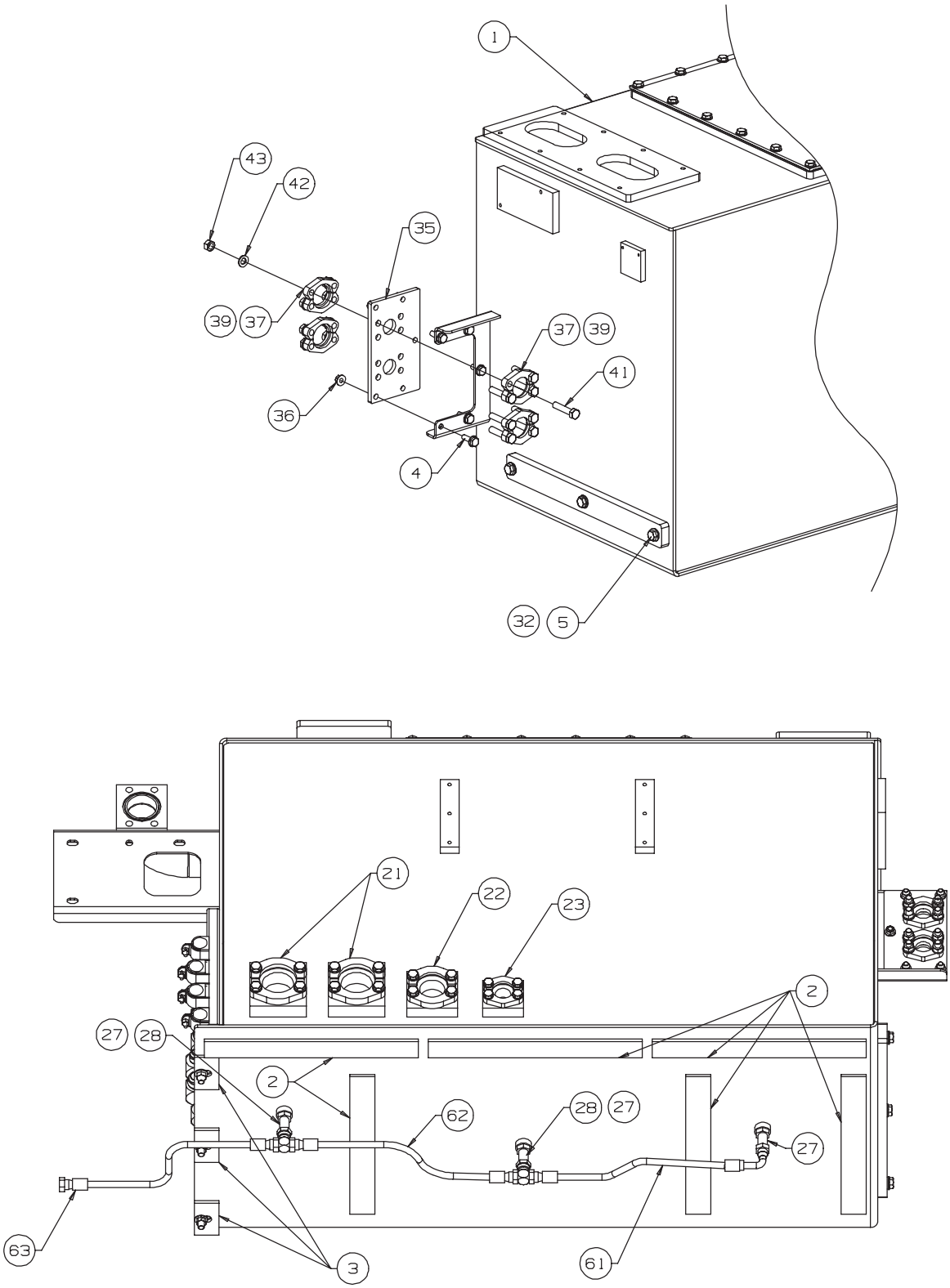
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

43	51619914	1	GASKET
43	57668071	1	PLUG, 3 CIRCUIT
44	57214405	1	CONTACT, #16
45	57678104	1	WEDGE, 3 SOCKET

52330065 HYDRAULIC TANK ASSEMBLY



52330065 HYDRAULIC TANK ASSEMBLY



WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

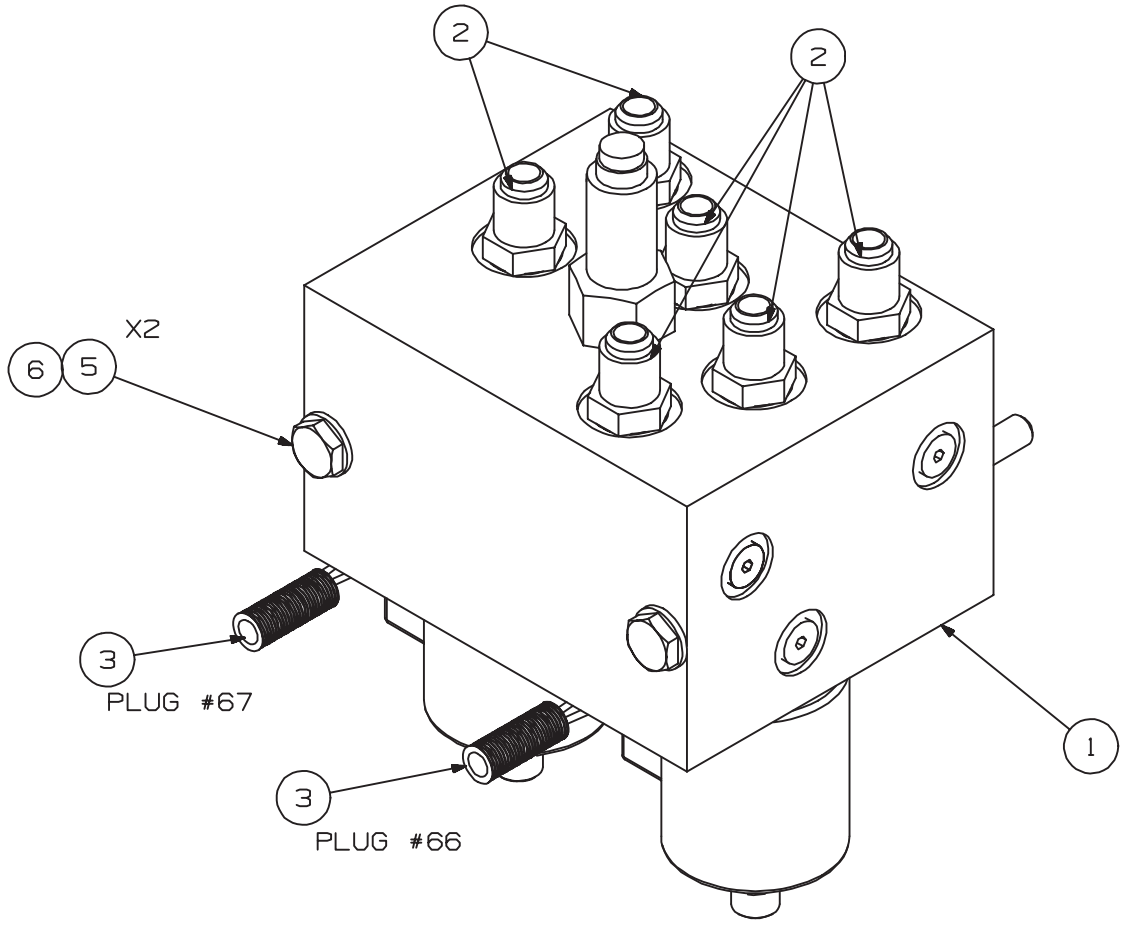
52330065 HYDRAULIC TANK ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57728768	1	TANK, HYDRAULIC	
2	51619377	6	STRIP, ISOLATOR	
3	52104767	3	STRIP, ISOLATOR	
4	96726914	5	BOLT, FLANGED HD.	
5	96702535	3	WASHER, FLAT	
6	96726716	3	BOLT, FLANGED HD.	
7	96726815	3	LOCKNUT, FLANGED HD.	
8	51612356	1	GAUGE, LEVEL	
9	50788397	2	LOCKWASHER	
12	57677056	1	SENSOR, LOW OIL LEVEL	
13	95264958	1	TEE	
14	52306461	1	BREATHER, HYDRAULIC TANK	
15	95037453	1	BUSHING, REDUCING	
16	51352136	1	TEE	
17	51615946	1	GAUGE	
18	57552275	1	VALVE, CHECK	
19	52306479	1	REGULATOR	
20	95364469	1	ADAPTER	
21	51366615	2	KIT, FLANGE	
22	51914299	1	KIT, FLANGE	
23	52086337	1	KIT, FLANGE	
25	95279402	2	ADAPTER	
26	95387890	1	CAP	
27	35294156	3	ADAPTER	
28	95642484	2	ADAPTER	
32	96727177	3	BOLT	
34	95279386	1	ADAPTER	
35	52322633	1	PLATE, BULKHEAD	
36	96726807	5	LOCKNUT, FLANGED HD.	
37	95375093	8	FLANGE, SPLIT HALVE	
39	95357919	4	O–RING	
41	95999173	8	SCREW, FLANGEHEAD	
42	95939955	8	WASHER, LOCK	
43	95955894	8	LOCKNUT, HEX.	
54	95219853	2	ADAPTER	
55	57342420	2	CLAMP	
57	57443681	1	CLAMP, HYDRA ZORB	
58	57262503	1	CLAMP, HYDRA ZORB	

52330065 HYDRAULIC TANK ASSEMBLY

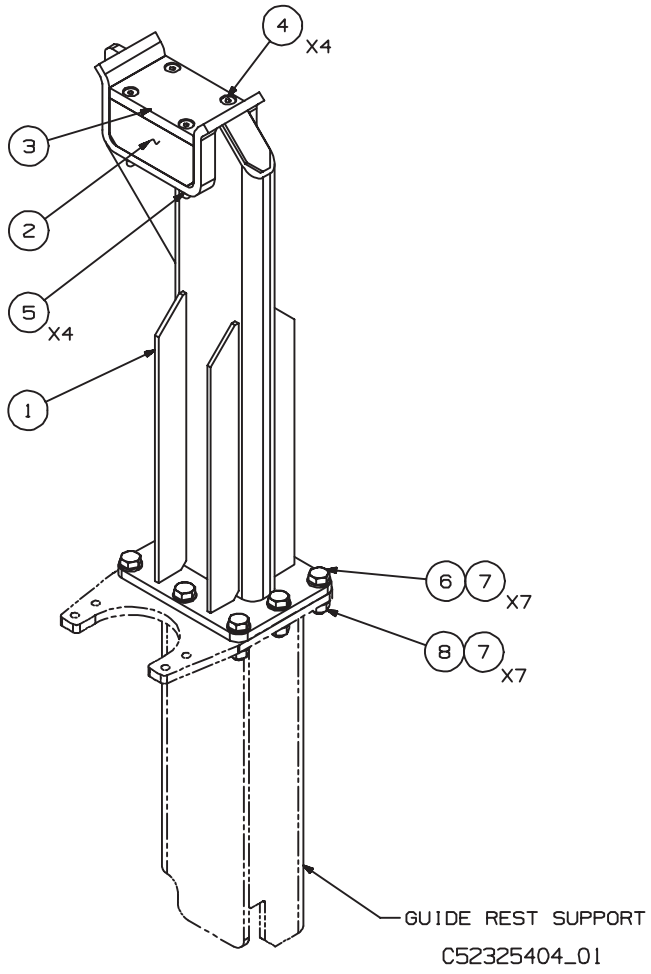
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
61	51028462	0	HOSE	
62	56998875	0	HOSE	
63	58143181	0	HOSE	
65	57678088	1	CONNECTOR,3 PIN	
66	59436840	1	PIN,SIZE 16	
67	57678096	1	WEDGE,3 PIN	
68	95364469	1	FITTING	
69	95263380	1	FITTING	
70	95263380	1	FITTING	
331	50978543	0	HOSE	

52316643 TRACK OSCILLATION MANIFOLD ASSEMBLY



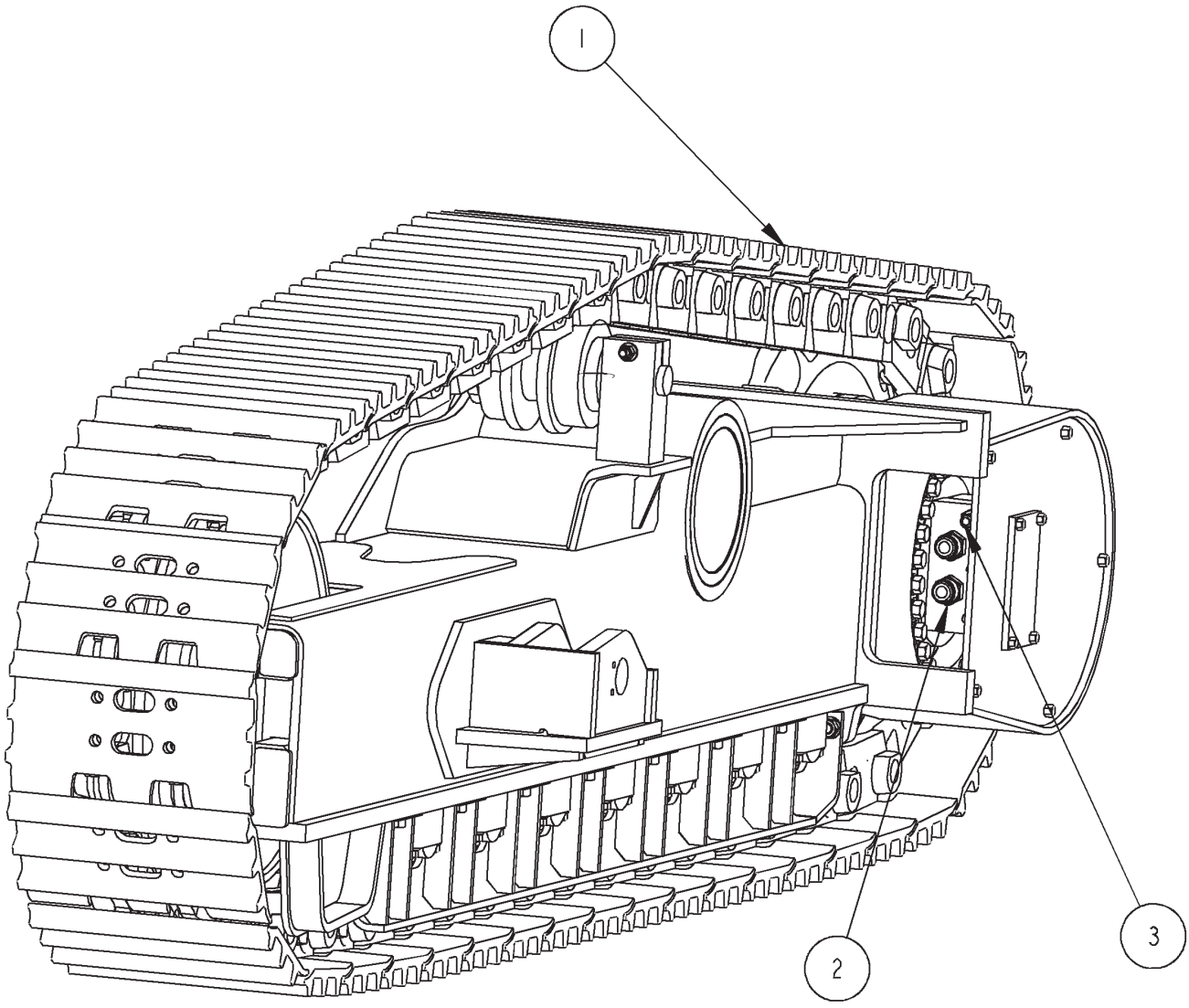
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52138120	1	MANIFOLD, TRACK OSCILLATION	
1A	51782605	1	.CARTRIDGE, HYDRAULIC	
1B	51729663	2	.VALVE, SOLENOID	
1C	51785889	2	.COIL, SOLENOID	
1D	52138237	1	.CARTRIDGE, COUNTERBALANCE VALVE	
2	95365078	6	ADAPTER	
3	51919488	15	LOOM, ELECTRICAL WIRE	
5	96713128	2	CAPSCREW	
6	96702519	2	WASHER, FLAT	

52325404 GUIDE REST ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52122256	1	WELDMENT, HEADREST	
2	52091352	1	PAD, HEADREST	
3	52091360	1	PLATE, HEADREST	
4	95957544	4	SCREW, SHOULDER	
5	95417929	4	LOCKNUT	
6	96700216	7	CAPSCREW	
7	96701438	14	WASHER, PLAIN	
8	96703657	7	NUT, HEX	

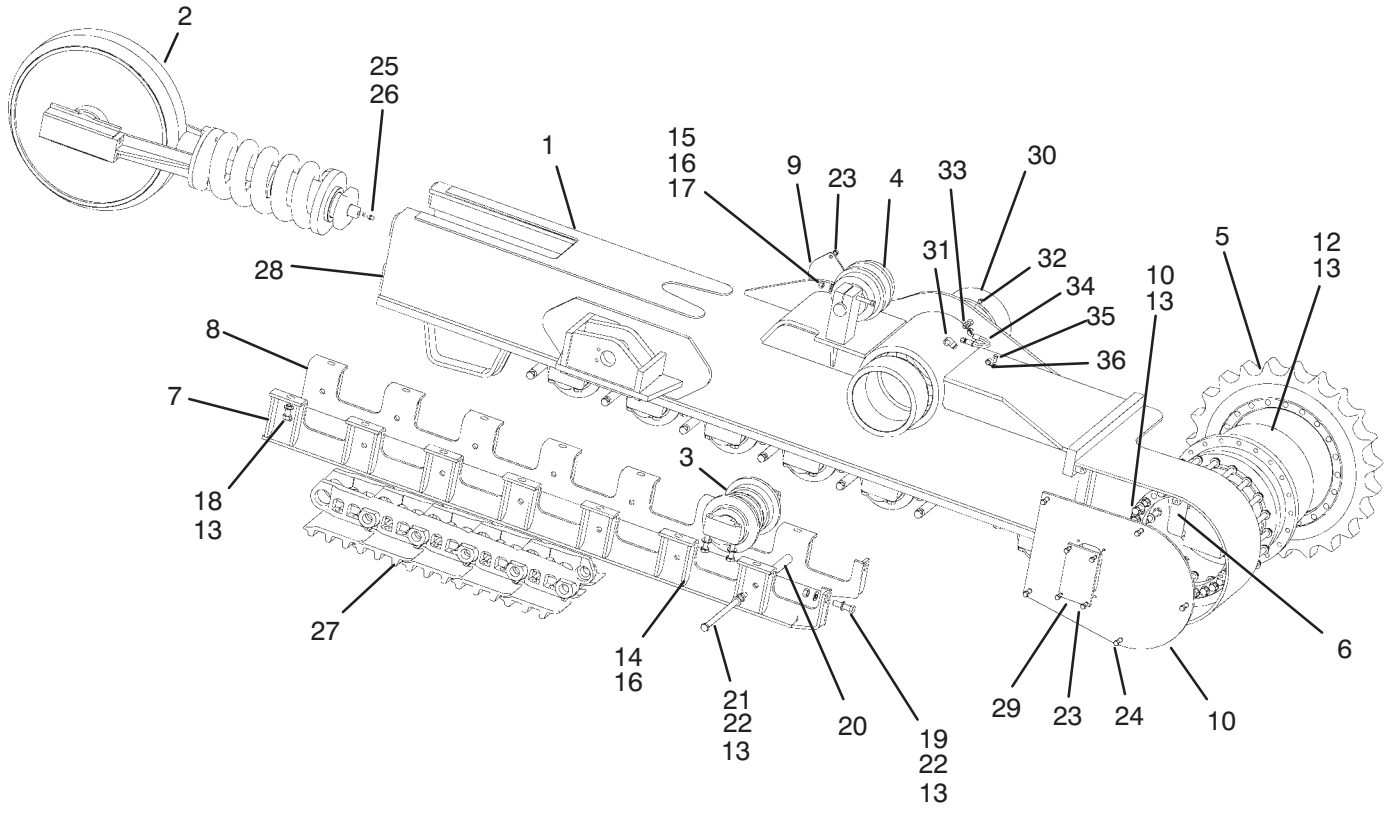
57711871 TRACK ASSEMBLY (LH)



57711871 TRACK ASSEMBLY (LH)

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57678203	1	TRACK, LH *REFER TO PAGE 3.1–1*	
2	52301744	2	ADAPTER, CONVERSION	
3	52301751	1	ADAPTER, CONVERSION	

57678211 TRACK, RH



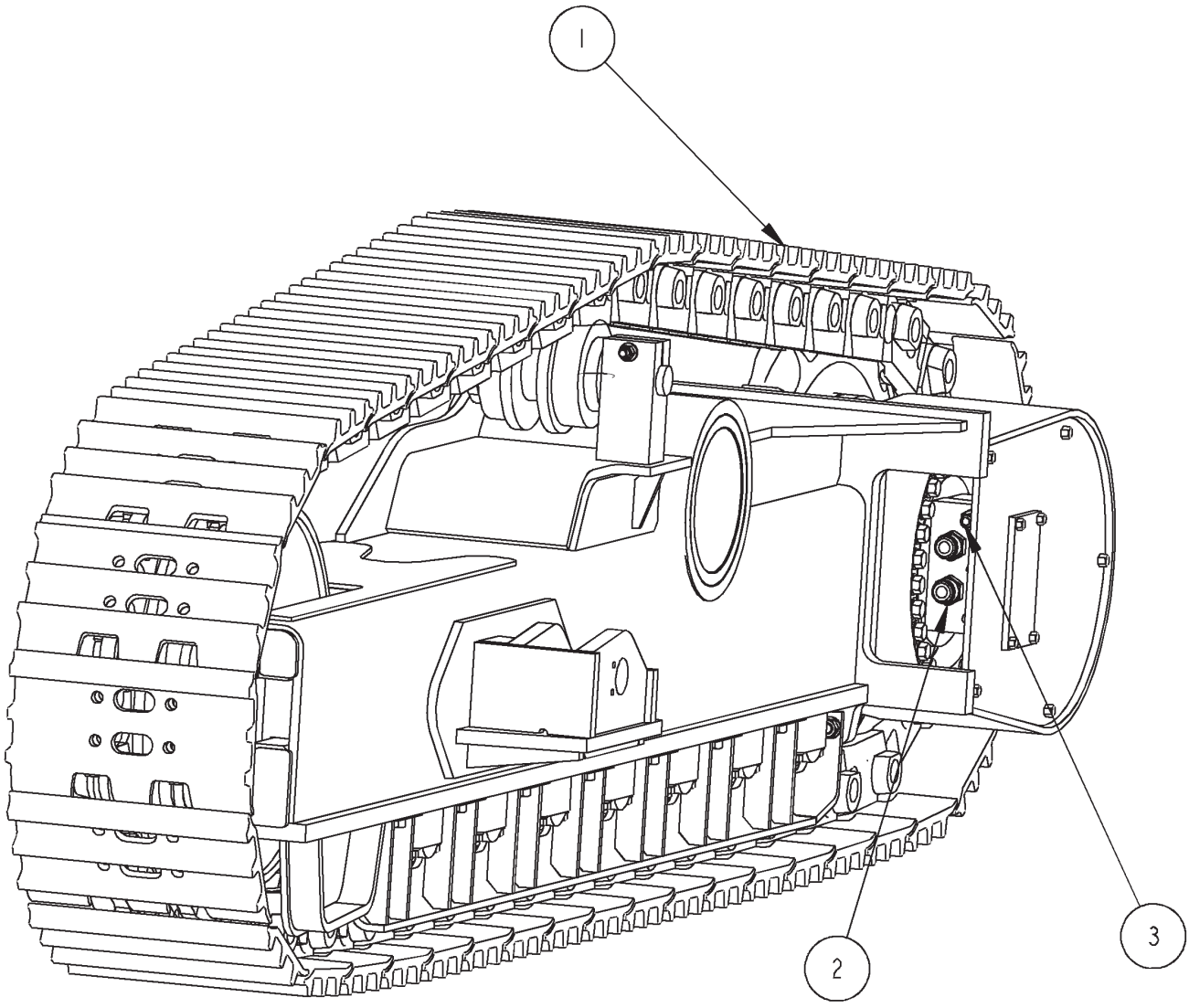
57678211 TRACK, RH

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57695603	1	FRAME,TRACK,RH	
2	57695611	1	IDLER UNIT,TRACK	
			REFER TO PAGE 3.4–1	
3	57695629	7	ROLLER, TRACK	
			REFER TO PAGE 3.5–1	
4	57695637	1	ROLLER, CARRIER	
			REFER TO PAGE 3.6–1	
5	57695645	1	SPROCKET, TRACK DRIVE	
6	52300654	1	FINAL DRIVE	
			REFER TO PAGE 3.7–1	
7	57695652	1	GUARD,LH	
8	57695660	1	GUARD, ROCK (RH)	
9	57695678	1	PLATE, COVER	
10	57695686	1	COVER, FINAL DRIVE	
11	96744917	30	BOLT	
12	96705520	21	BOLT	
13	96702550	104	WASHER	
14	96701503	28	BOLT	
15	96704721	1	BOLT	
16	96702535	1	WASHER	
17	96705652	1	NUT, LOCK	
18	96703186	14	CAPSCREW	
19	96700893	2	SCREW, HEX	
20	57695694	7	SPACER, ROCK GUARD	
21	57695736	7	BOLT	
22	96727151	9	NUT	
23	96727169	6	BOLT	
24	96727250	5	BOLT	
25	51236925	1	GASKET	
26	51236933	1	FITTING	
27	57695702	1	CHAIN, TRACK	
			REFER TO PAGE 3.7–1	
28	57687170	1	DECAL, UNDERCARRIAGE	
29	57695728	1	PLATE, COVER	
30	51952158	2	BUSHING, TRACK OSCILLATION	
31	95293403	1	ELBOW	
32	95201307	1	FITTING	

57678211 TRACK ASSEMBLY (RH)

REF. NO.	PART NO.	QTY.	PART NAME	SERIAL
	REMARKS	NO.		
33	95263380	1	FITTING	
34	51028371	1	HOSE ASSY	
35	96728480	1	BOLT, FLANGED HD.	
36	95368338	1	CLAMP, HOSE	

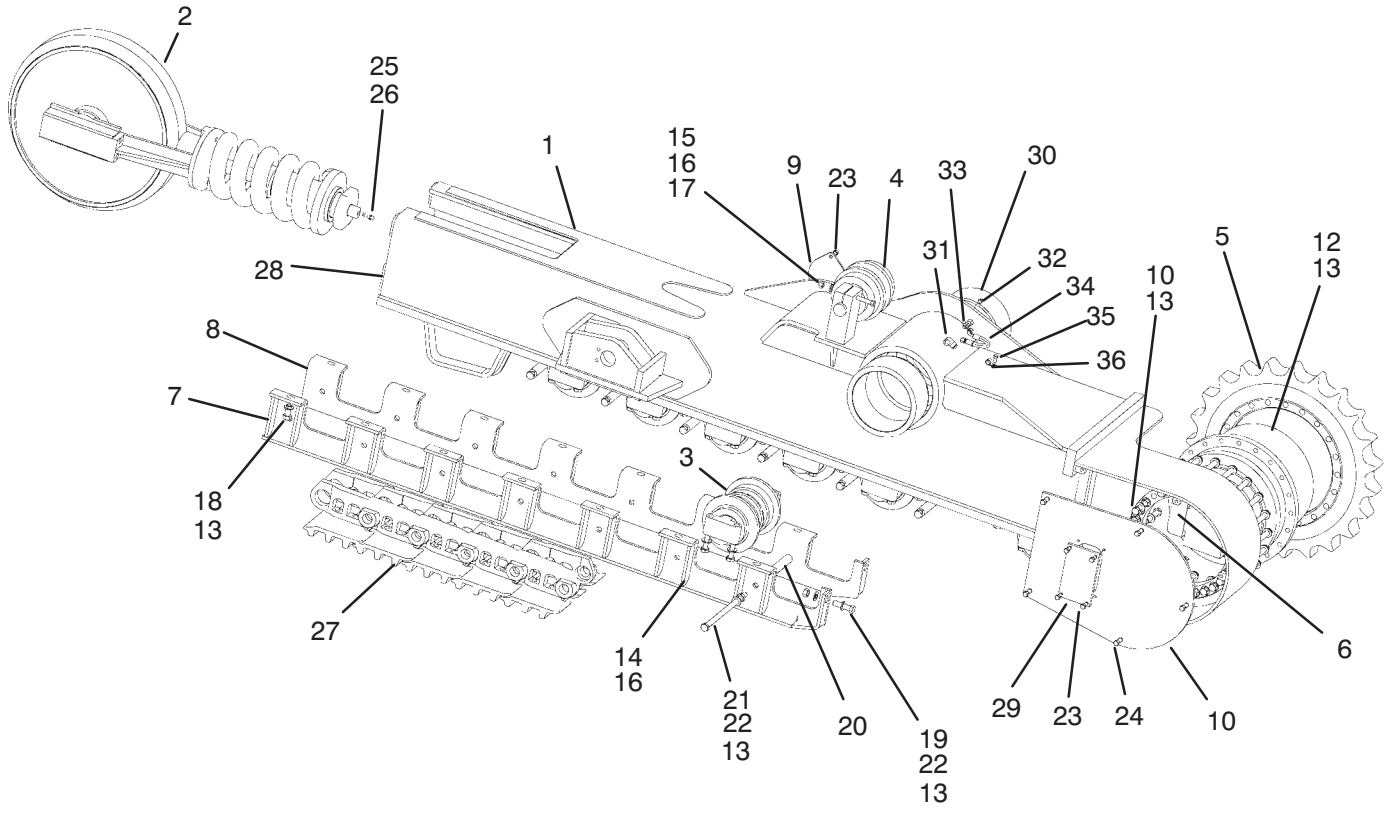
57711863 TRACK ASSEMBLY (RH)



57711863 TRACK ASSEMBLY (RH)

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57678211	1	TRACK, RH *REFER TO PAGE 3.3–1*	
2	52301744	2	ADAPTER, CONVERSION	
3	52301751	1	ADAPTER, CONVERSION	

57678211 TRACK, RH



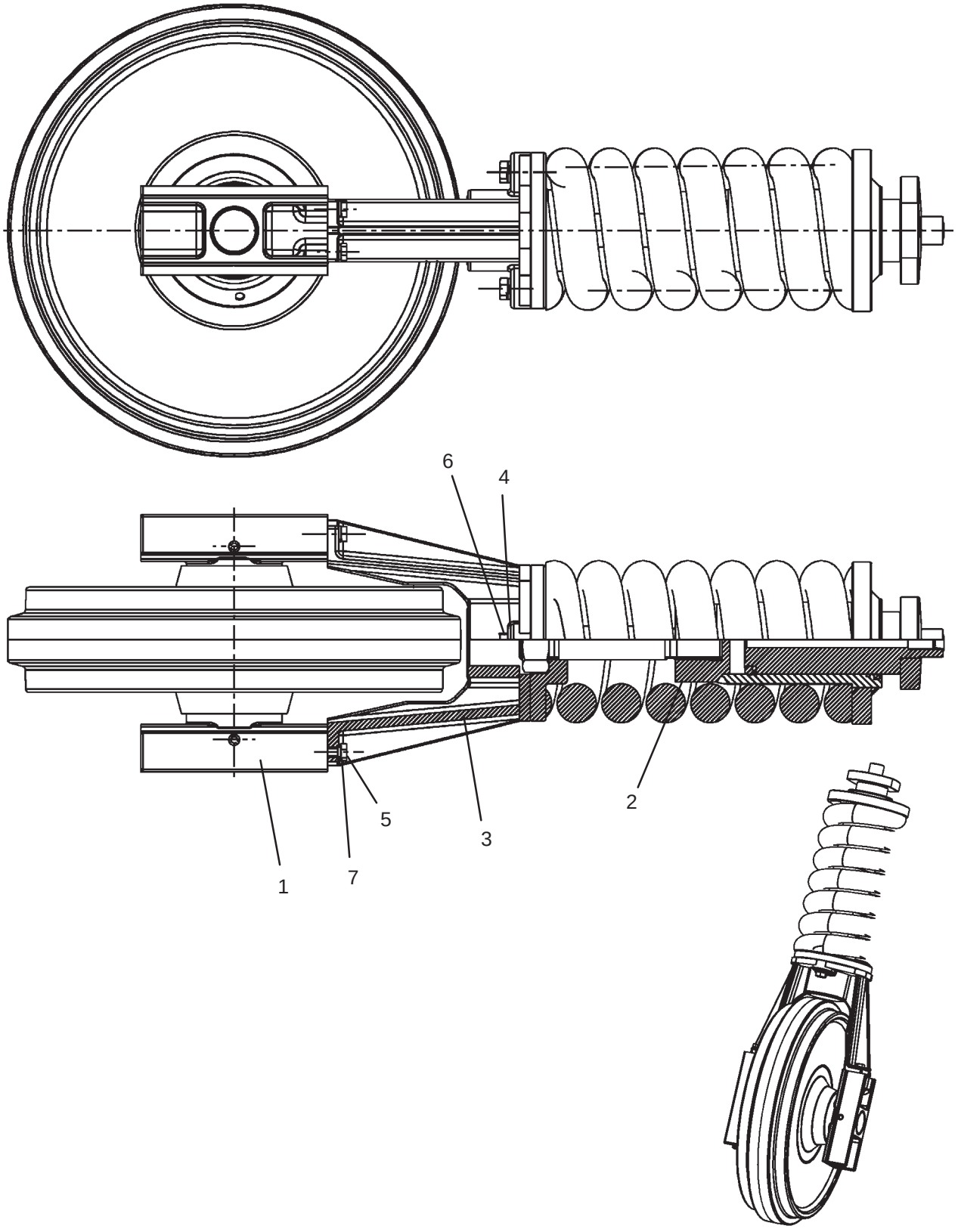
57678211 TRACK, RH

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57695603	1	FRAME,TRACK,RH	
2	57695611	1	IDLER UNIT,TRACK	
			REFER TO PAGE 3.5–1	
3	57695629	7	ROLLER, TRACK	
			REFER TO PAGE 3.6–1	
4	57695637	1	ROLLER, CARRIER	
			REFER TO PAGE 3.7–1	
5	57695645	1	SPROCKET, TRACK DRIVE	
6	52300654	1	FINAL DRIVE	
			REFER TO PAGE 3.1–1	
7	57695652	1	GUARD,LH	
8	57695660	1	GUARD, ROCK (RH)	
9	57695678	1	PLATE, COVER	
10	57695686	1	COVER, FINAL DRIVE	
11	96744917	30	BOLT	
12	96705520	21	BOLT	
13	96702550	104	WASHER	
14	96701503	28	BOLT	
15	96704721	1	BOLT	
16	96702535	1	WASHER	
17	96705652	1	NUT, LOCK	
18	96703186	14	CAPSCREW	
19	96700893	2	SCREW, HEX	
20	57695694	7	SPACER, ROCK GUARD	
21	57695736	7	BOLT	
22	96727151	9	NUT	
23	96727169	6	BOLT	
24	96727250	5	BOLT	
25	51236925	1	GASKET	
26	51236933	1	FITTING	
27	57695702	1	CHAIN, TRACK	
			REFER TO PAGE 3.8–1	
28	57687170	1	DECAL, UNDERCARRIAGE	
29	57695728	1	PLATE, COVER	
30	51952158	2	BUSHING, TRACK OSCILLATION	
31	95293403	1	ELBOW	
32	95201307	1	FITTING	

57678211 TRACK ASSEMBLY (RH)

REF. NO.	PART NO.	QTY.	PART NAME	SERIAL
	REMARKS	NO.		
33	95263380	1	FITTING	
34	51028371	1	HOSE ASSY	
35	96728480	1	BOLT, FLANGED HD.	
36	95368338	1	CLAMP, HOSE	

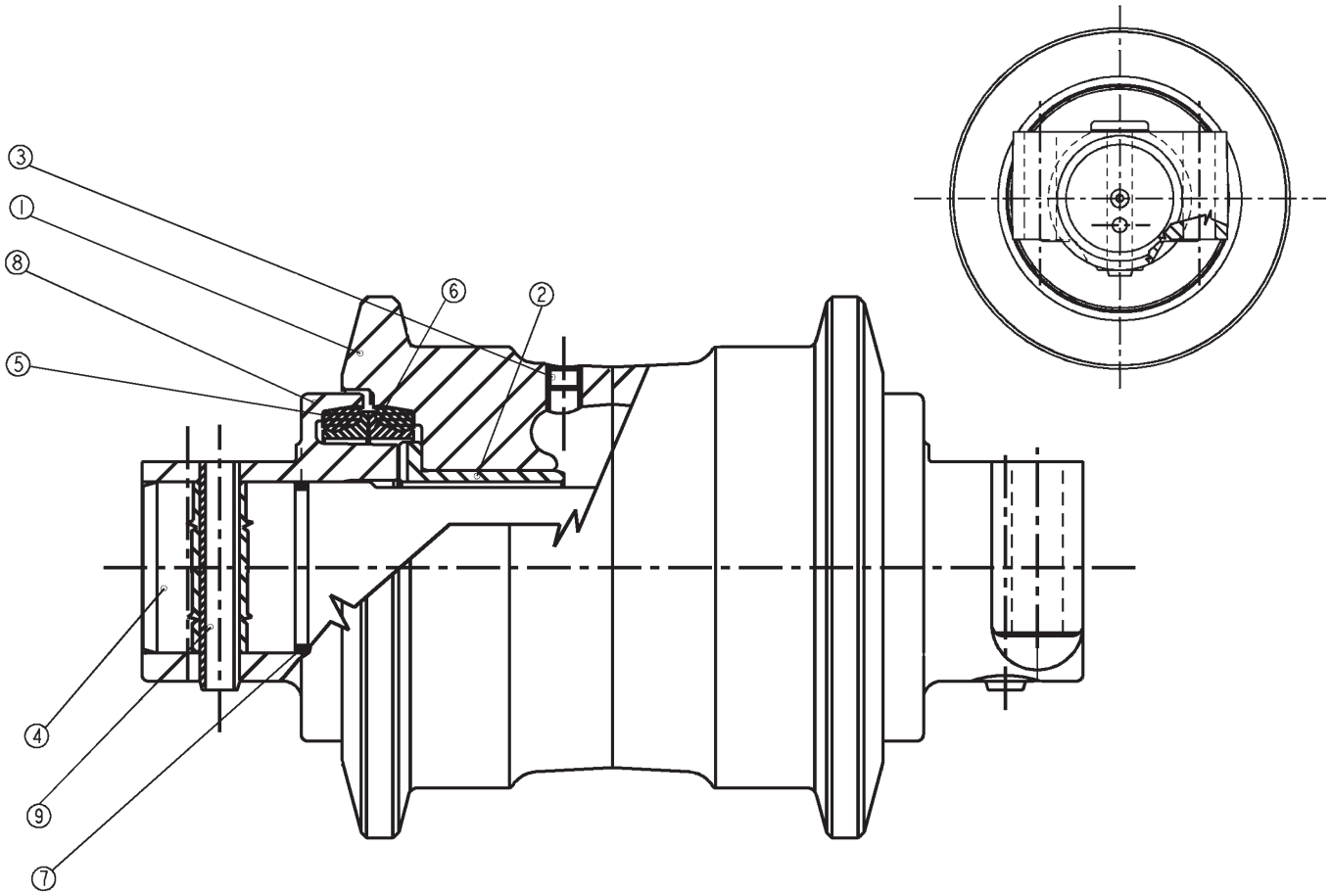
57695611 TRACK IDLER UNIT



57695611 TRACK IDLER UNIT

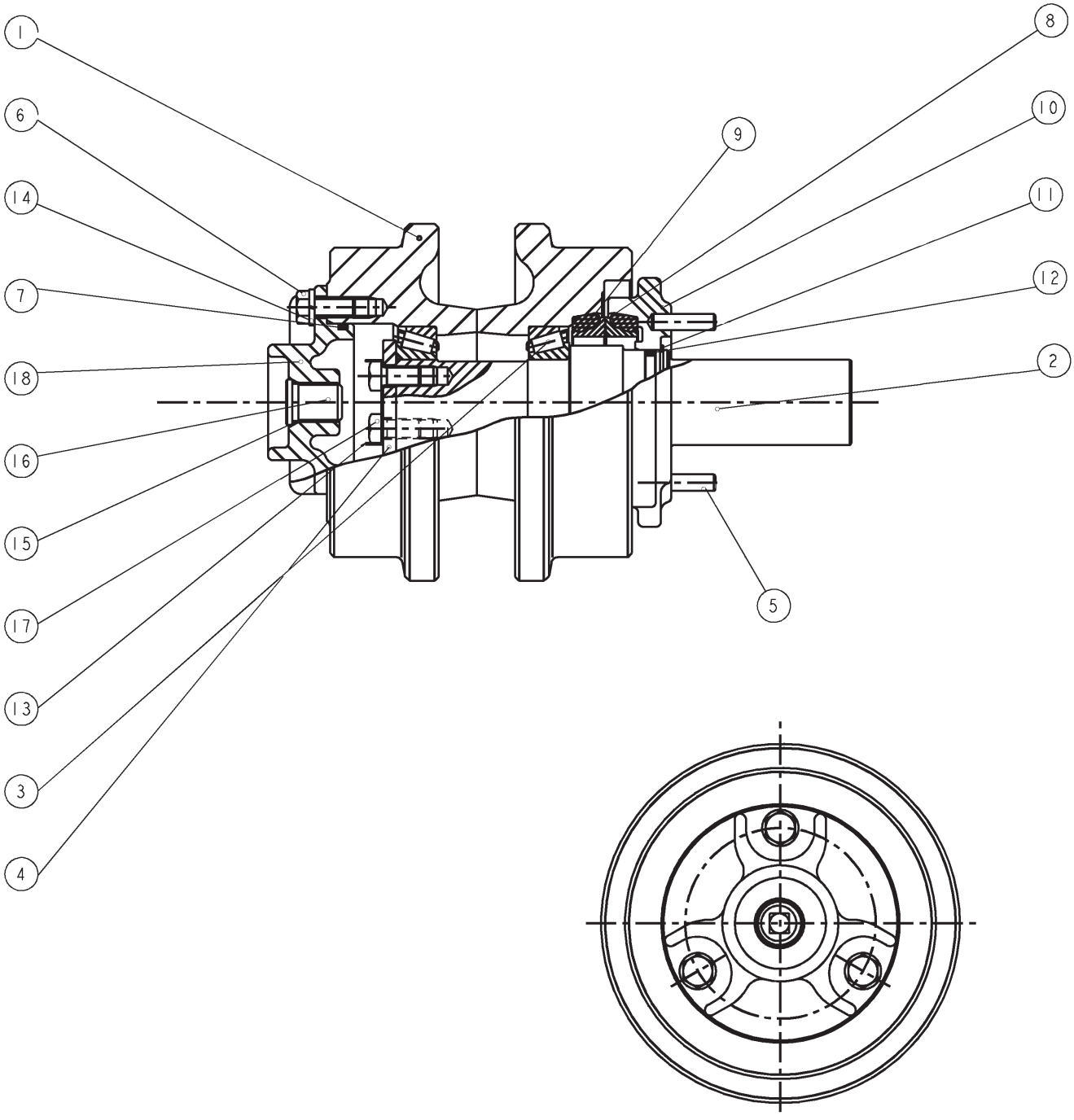
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57695751	1	IDLER WITH BRACKETS	
2	57695769	1	SPRING & TENSION DEVICE	
3	57695777	1	FORK	
4	96702550	2	WASHER	
5	96712187	4	BOLT	
6	96706262	2	BOLT	
7	96702535	4	WASHER	

57695629 TRACK ROLLER ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57695785	1	SHELL, ROLLER	
2	57695793	2	BUSHING	
3	57695801	1	PLUG	
4	57695819	1	SHAFT	
5	57695827	4	O–RING	
6	57695835	4	RING, SEAL	
7	57695843	2	O–RING	
8	57695850	2	BRACKET	
9	57695868	2	PIN, DOWEL	

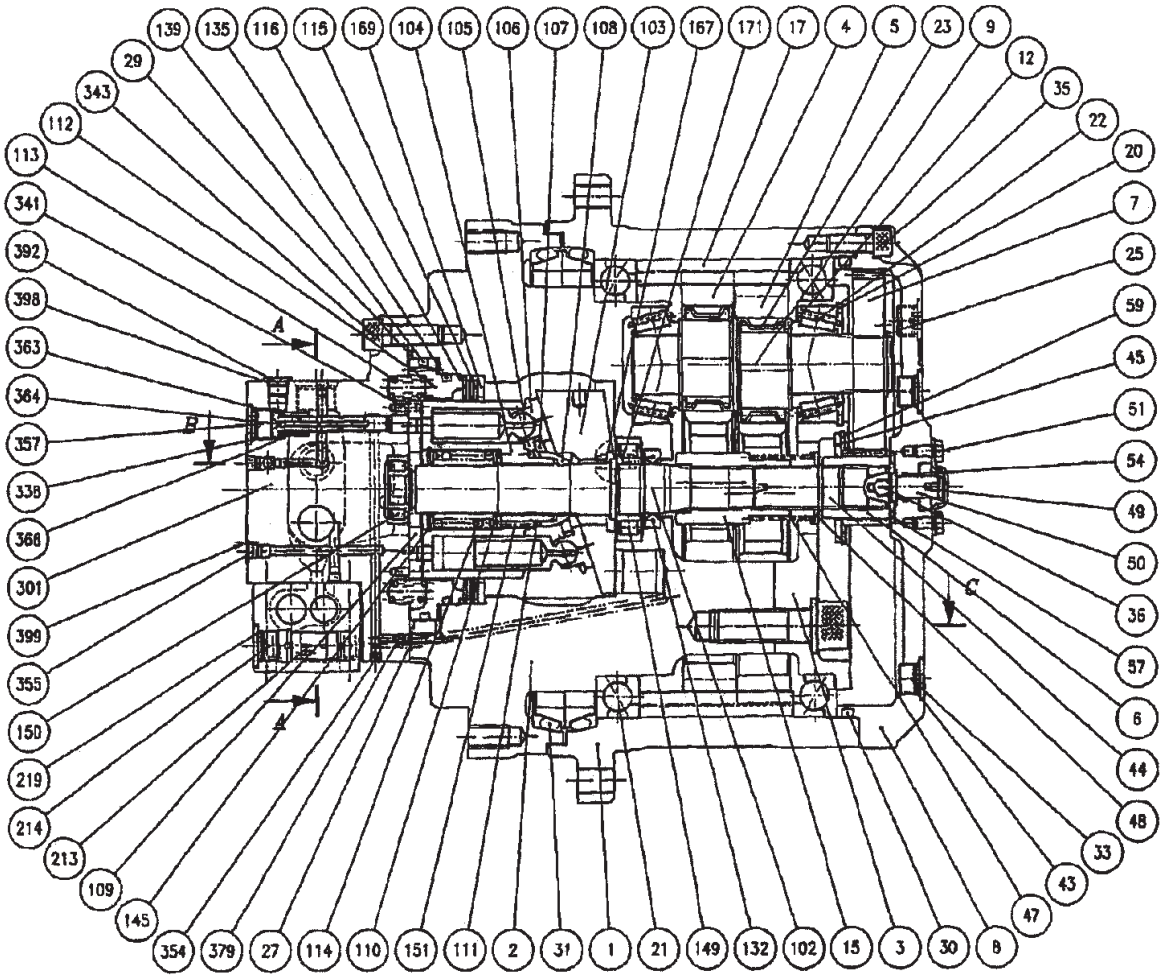
57695637 ROLLER CARRIER ASSEMBLY

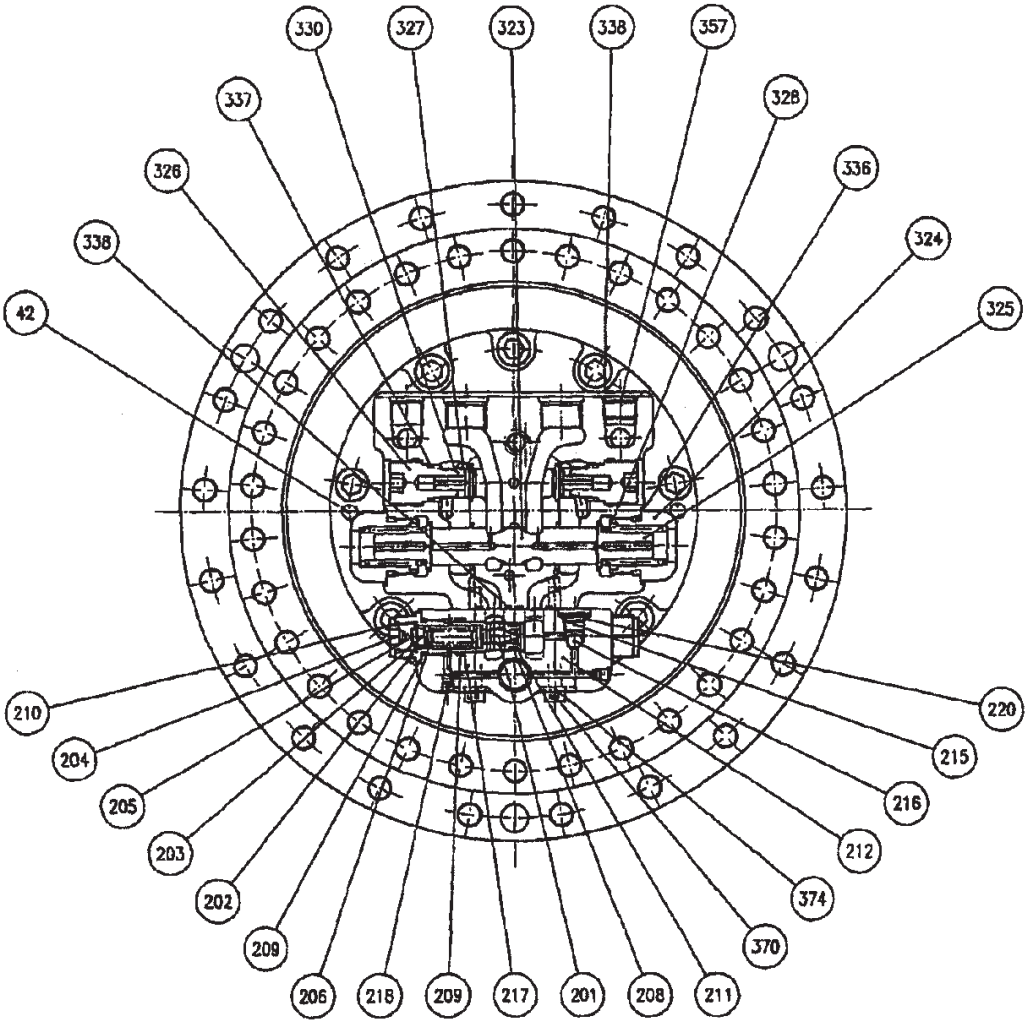


57695637 ROLLER CARRIER ASSEMBLY

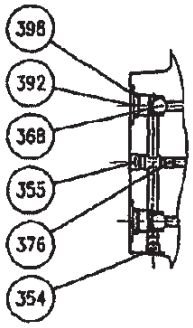
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57695876	1	SHELL, ROLLER	
2	57695884	1	SHAFT	
3	57695892	2	BEARING	
4	57700700	1	DISK, INTERNAL	
5	57700718	2	PIN	
6	57700726	3	BOLT, SELF–LOCKING	
7	57700734	1	O–RING	
8	57700742	2	RING, SEAL	
9	57700759	2	O–RING	
10	57700767	1	COLLAR	
11	57700775	1	RING, ELASTIC	
12	57700783	1	O–RING	
13	57700791	1	PLATE, SECURITY	
14	57700809	3	WASHER, ELASTIC	
15	57700817	1	O–RING	
16	57700825	1	PLUG	
17	57700833	2	BOLT, SELF–LOCKING	
18	57700841	1	COVER	

52300654 FINAL DRIVE

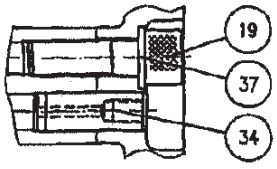




SECTION A – A



SECTION B – B

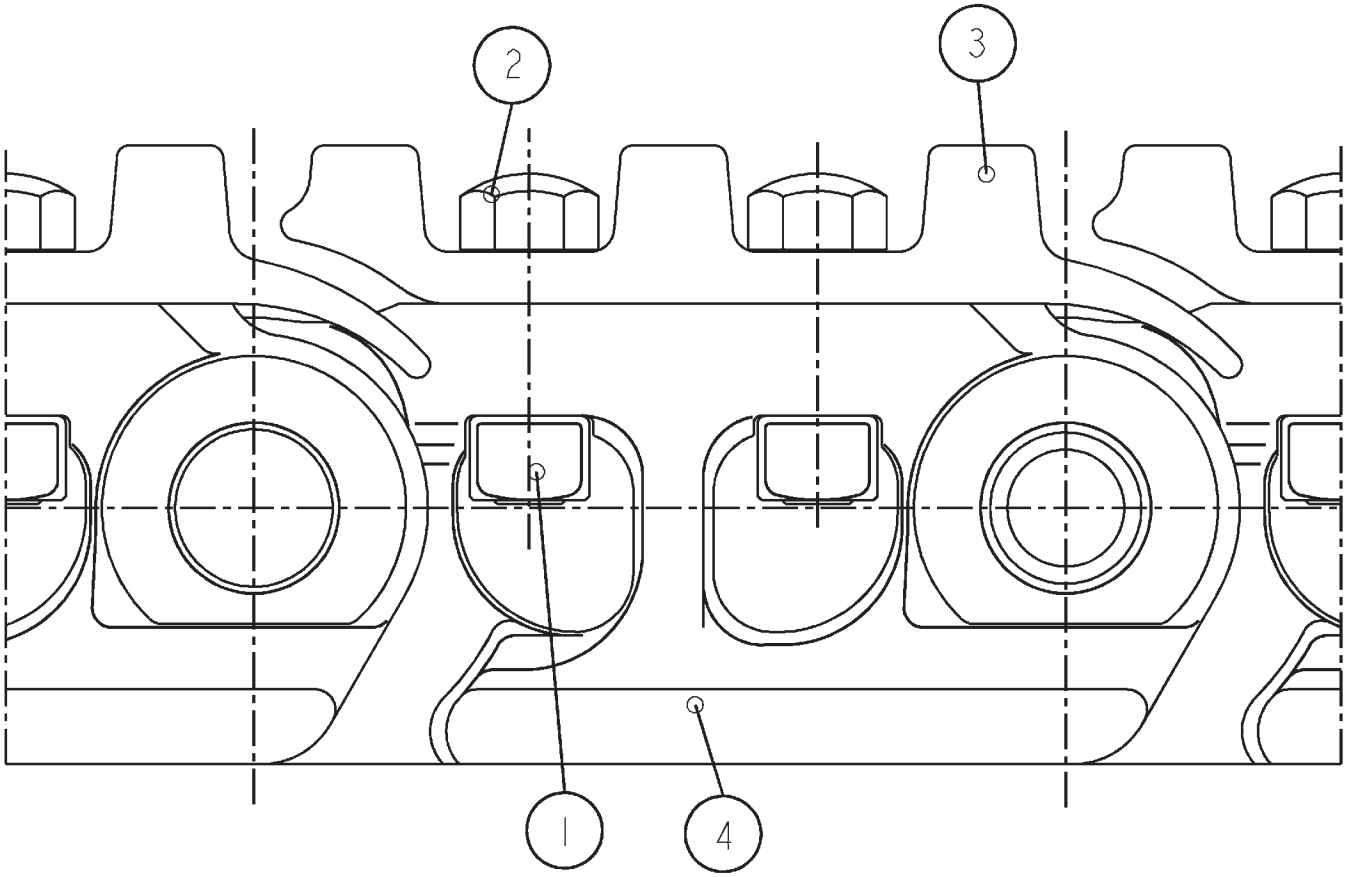


SECTION C – C

52300654 FINAL DRIVE

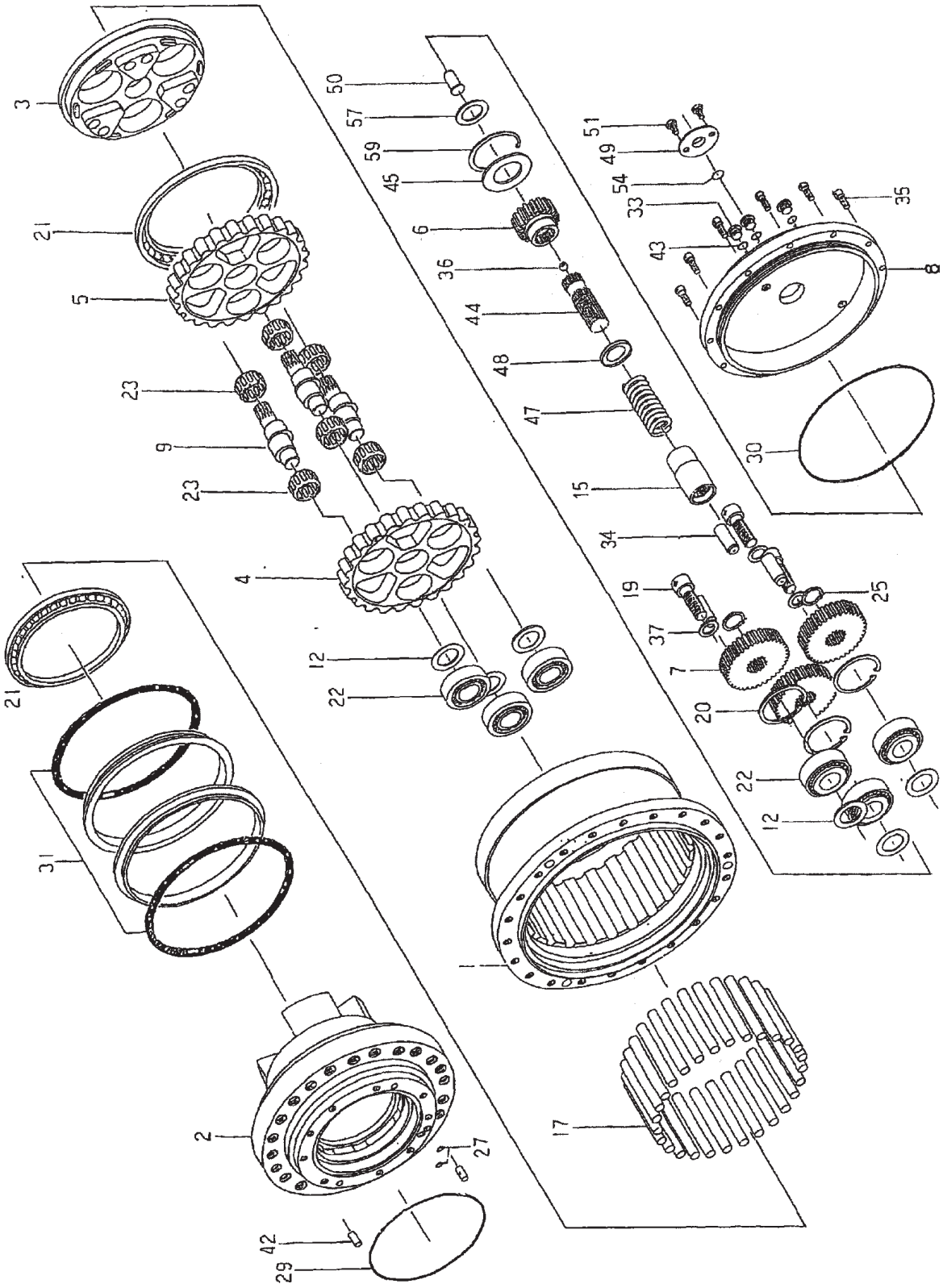
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52312659	1	HUB	
	52312634	1	ASSEMBLY, RV GEAR	
	52312816	1	KIT, SPUR GEAR	
6	52312667	1	GEAR, INPUT	
15	52312675	1	COUPLING	
21	52312683	2	BEARING	
44	52312691	1	SHAFT	
	52312824	1	MOTOR, HYDRAULIC	
149	52312717	1	BEARING, ROLLER	
150	52312725	1	BEARING, ROLLER	
	52312733	2	KIT, VALVE	
	52312741	1	KIT, BODY	
	52312758	1	VALVE, CONTROL	
380	52312766	2	CONNECTOR	
381	52312774	1	CONNECTOR	
	52312782	1	KIT, SEAL	
400	57713182	1	REDUCTION GEARS *REFER TO PAGE 3.9–1*	
406	57713497	1	MOTOR,HYDRAULIC *REFER TO PAGE 3.10–1*	
410	57713661	1	SRV2	
	57713679	2	KIT, VALVE	
	57713687	1	KIT, SLEEVE	
	57713695	1	KIT, BODY	
	57713703	1	KIT, PISTON BODY	
415	57713711	1	VALVE, CONTROL	
	57713752	2	PIN, PARALLEL	
	57713760	9	BOLT, HEX SOCKET	
	57713729	1	FLANGE ASSY, REAR	
	57713737	1	KIT, FLANGE, REAR	
	57713745	1	KIT, SPOOL	
XXX	52312634	1	ASSY, RV GEAR	
XXX	52312733	2	KIT, VALVE	
XXX	52312741	1	KIT, BODY	
XXX	52312758	1	VALVE, CONTROL	
XXX	52312782	1	KIT, SEAL	
XXX	52312816	1	KIT, SPUR GEAR	
XXX	52312824	1	MOTOR, HYDRAULIC	

57695702 TRACK CHAIN



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57700858	168	NUT	
2	57700866	168	BOLT	
3	57700874	42	SHOES	
4	57700882	1	LINK, WITHOUT SHOES	

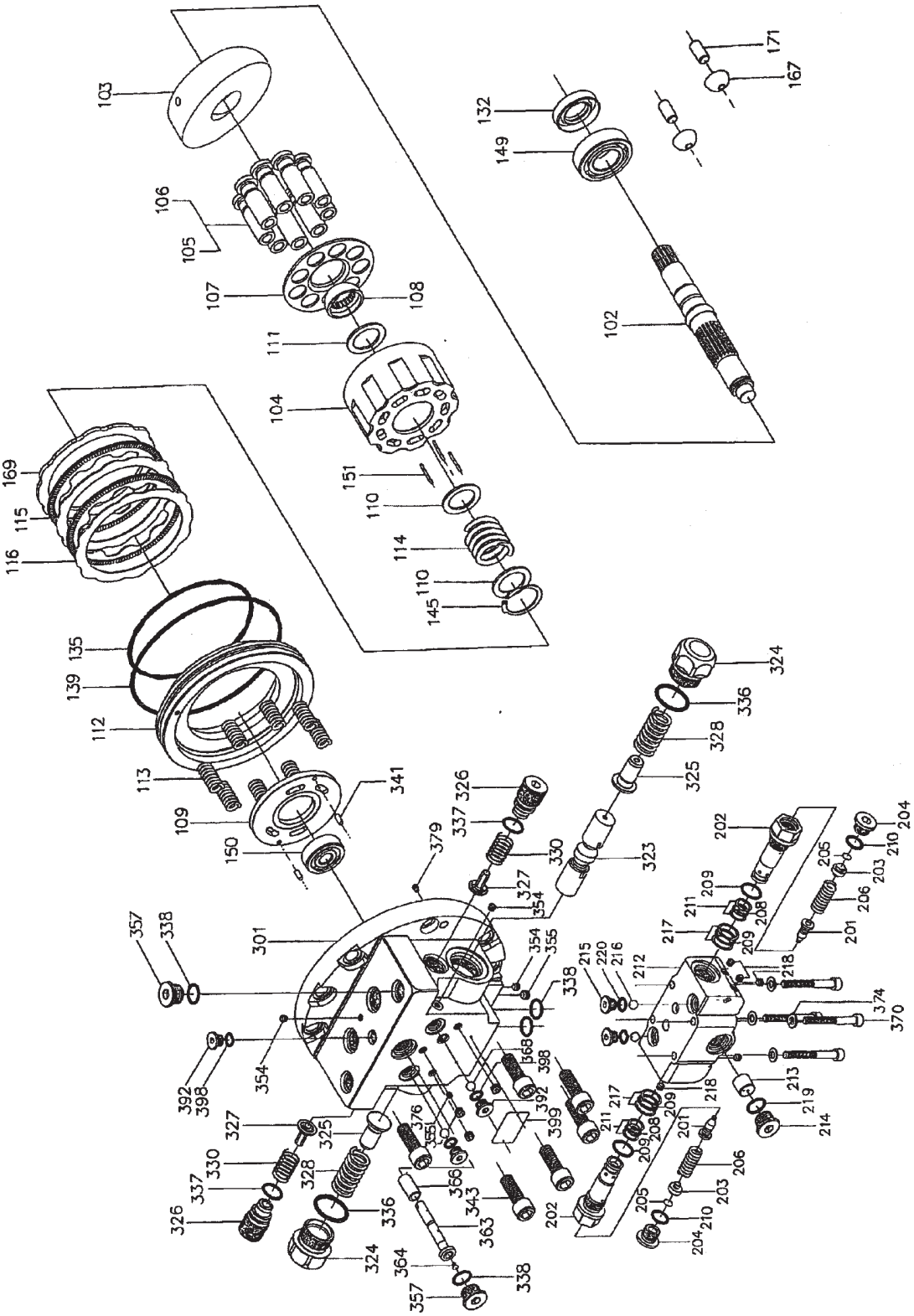
57713182 REDUCTION GEARS



57713182 REDUCTION GEARS

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
001	57713240	1	HUB	
006	57713257	1	GEAR, INPUT	
008	57713265	1	COVER	
015	57713273	1	COUPLING	
017	57713281	28	PIN	
020	57713299	3	SNAP RING	
021	57713307	2	BALL BEARING	
025	57713315	3	SNAP RING FOR SHAFT	
027	57713323	2	O–RING	
029	57713331	1	O–RING	
030	57713349	1	O–RING	
033	57713356	3	PLUG, SOCKET HEX	
035	57713364	12	BOLT, SOCKET HEX	
036	57713372	1	BALL, STEEL	
042	57713380	2	PIN, PARALLEL	
043	57713398	3	O–RING	
044	57713406	1	SHAFT	
045	57713414	1	PLATE	
047	57713422	1	SPRING	
048	57713430	1	SPRING GUIDE	
049	57713448	1	COVER	
050	57713455	1	PIN	
051	57713463	2	BOLT, HEX HEAD	
054	57713471	1	O–RING	
059	57713489	1	SNAP RING	
401	57713190	1	KIT, SPINDLE	
	57713208	1	SPINDLE ASSY	
403	57713216	1	GEAR ASSY, RV	
404	57713224	1	KIT, SPUR GEAR	
405	57713232	1	KIT, FLOATING SEAL	

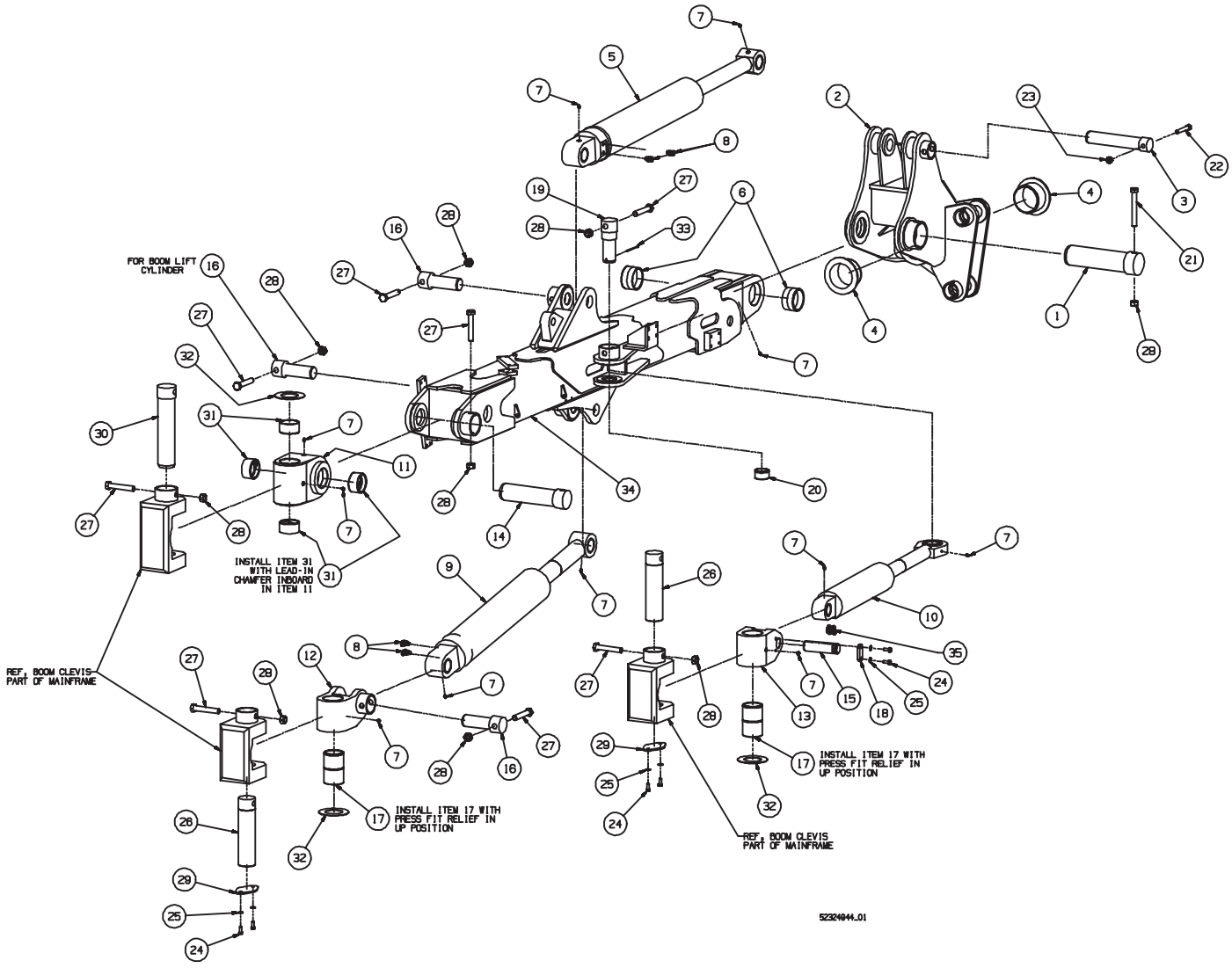
57713497 MOTOR, HYDRAULIC



57713497 MOTOR, HYDRAULIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
102	57713513	1	SHAFT	
103	57713521	1	PLATE, SWASH	
109	57713539	1	PLATE, TIMING	
112	57713547	1	PISTON	
113	57713554	10	SPRING	
115	57713562	2	PLATE, FRICTION	
116	57713570	2	PLATE, MATING	
132	57713588	1	OIL SEAL	
135	57713596	1	O–RING	
139	57713604	1	O–RING	
149	57713620	1	ROLLER BEARING	
150	57713620	1	ROLLER BEARING	
167	57713638	1	PIVOT	
169	57713646	1	PLATE, MATING	
171	57713653	2	PIN, PARALLEL	
407	57713505	1	KIT, CYLINDER AND PISTON	

52324944 BOOM ASSEMBLY

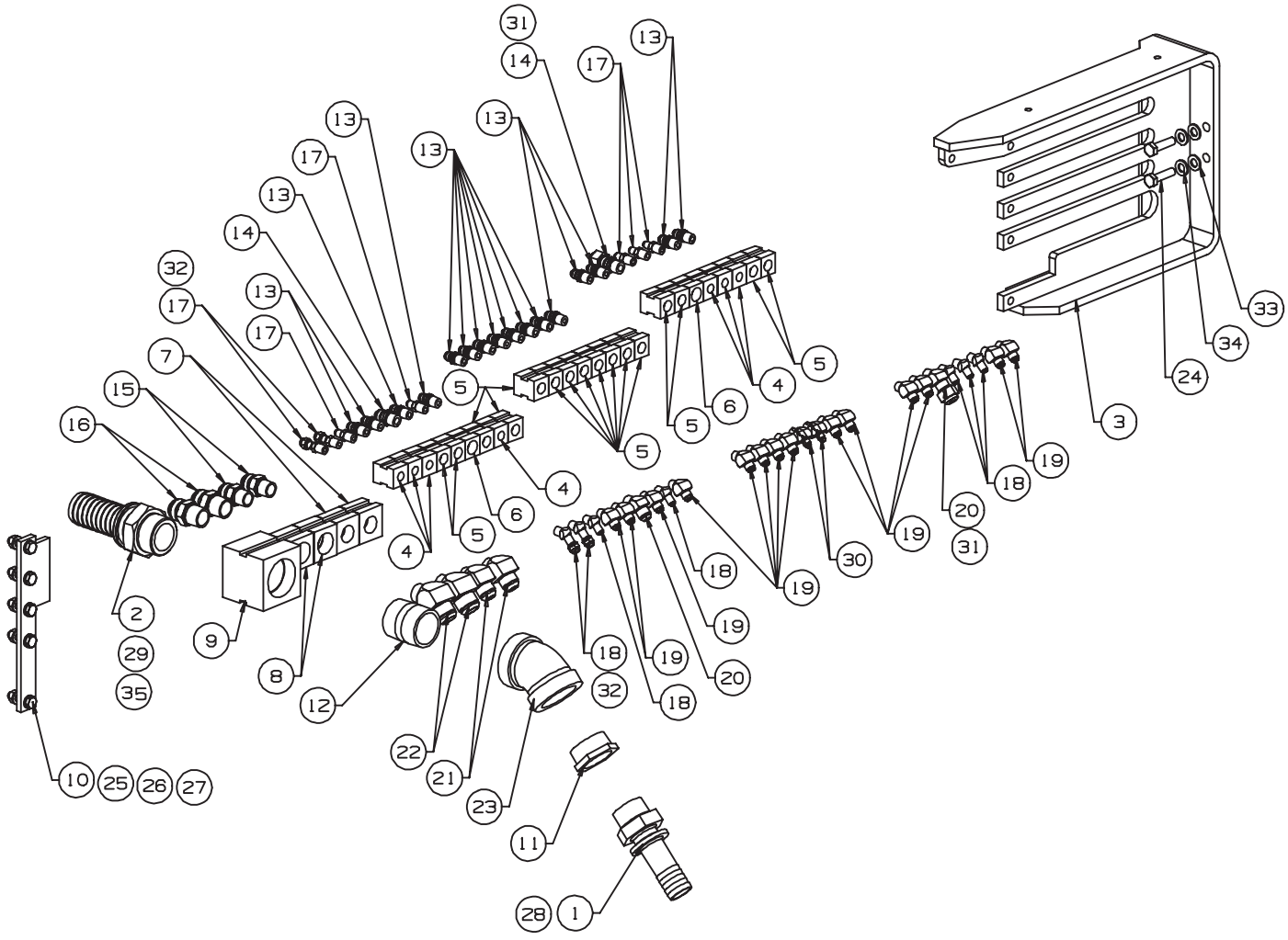


52324944 BOOM ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52282878	1	PIN, BOOM/DUMP BASE	
2	52136819	1	BASE, DUMP	
3	52282860	1	PIN, DUMP CYLINDER/DUMP BASE	
4	52295656	2	BUSHING, GUIDE SWING	
5	51992345	1	CYLINDER, GUIDE DUMP	
	51992444	1	.KIT, SEAL	
6	52295649	2	BUSHING, GUIDE DUMP	
7	95201281	11	FITTING, GREASE	
8	95329975	6	ELBOW	
9	51992311	1	CYLINDER, BOOM LIFT	
	51992428	1	.KIT, SEAL	
	52314549	1	.BUSHING, ROD EYE	
10	52283058	1	CYLINDER, BOOM SWING	
	51992410	1	.KIT, SEAL	
11	52314093	1	LINK, MAIN BOOM	
12	52295680	1	LINK, BOOM LIFT CYLINDER	
13	51608958	1	LINK, BOOM SWING CYLINDER	
14	52314135	1	PIN, MAIN BOOM LIFT	
15	51608974	1	PIN, BOOM SWING CYLINDER	
16	52295698	3	PIN, CYLINDER	
17	52295631	2	BUSHING, SWING CYLINDER LINKS	
18	51608867	1	PLATE, PIN RETAINER	
19	52087087	1	PIN, BOOM SWING CYLINDER	
20	52091295	1	BUSHING, BOOM SWING CYLINDER	
21	51193290	1	CAPSCREW	
22	96727102	1	CAPSCREW	
23	96704275	1	NUT	
24	96714860	6	CAPSCREW	
25	96702535	6	WASHER	
26	52314564	2	PIN, VERTICAL (SHORT)	
27	96702600	8	CAPSCREW	
28	96703681	9	NUT	
29	52096336	2	PLATE, PIN RETAINER	
30	52314127	1	PIN, VERTICAL (LONG)	
31	52314143	4	BUSHING, BOOM LINK	
32	52314150	3	BUSHING, THRUST	
33	95310256	1	PIN, COTTER	
34	52324951	1	WELDMENT, BOOM	
35	95363339	2	ADAPTER	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52326618 BOOM BULKHEAD ASSEMBLY

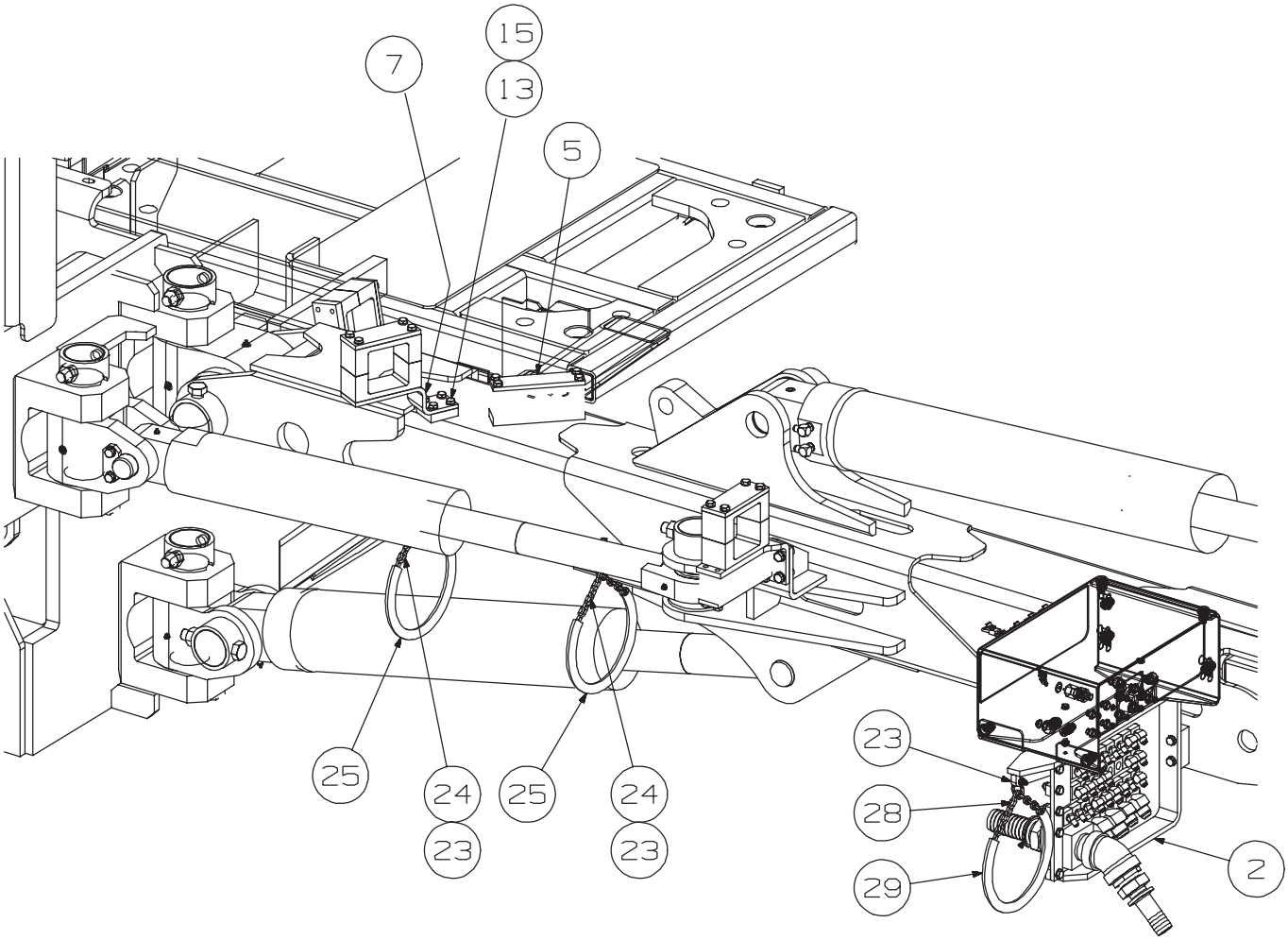


52326618 BOOM BULKHEAD ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	50023886	1	STEM, HOSE	
2	50023910	1	STEM, HOSE	
3	52326626	1	BULKHEAD, BOOM	
4	52326659	7	SOCKET, BULKHEAD (1/4 NPT)	
5	52326667	16	SOCKET, BULKHEAD (3/8 NPT)	
6	52326675	2	SOCKET, BULKHEAD (1/2 NPT)	
7	52326683	2	SOCKET, BULKHEAD (3/4 NPT)	
8	52326691	2	SOCKET, BULKHEAD (1 NPT)	
9	52326725	1	SOCKET, BULKHEAD (2 NPT)	
10	52326758	1	PLATE, SOCKET RETAINER	
11	95038212	1	BUSHING, REDUCING	
12	95097291	1	NIPPLE, PIPE	
13	95219713	16	ADAPTER	
14	95219721	2	ADAPTER	
15	95219747	2	ADAPTER	
16	95219762	2	ADAPTER	
17	95263380	7	ADAPTER	
18	95279055	7	ADAPTER	
19	95279089	14	ADAPTER	
20	95279097	2	ADAPTER	
21	95279105	2	ADAPTER	
22	95279121	2	ADAPTER	
23	95674982	1	ELBOW	
24	95378667	4	CAPSCREW	
25	96727300	5	NUT, HEX.	
26	96704556	5	CAPSCREW, HEX.	
27	96701982	10	WASHER, PLAIN	
28	50141720	1	CLAMP, HOSE	
29	50743731	1	CLAMP, HOSE	
30	95396404	2	FITTING	
31	95257325	2	CAP	
32	95257333	4	CAP	
33	96701412	4	WASHER	
34	95934733	4	WASHER, LOCK	
35	57358145	1	CABLE, HOSE RESTRAINT	

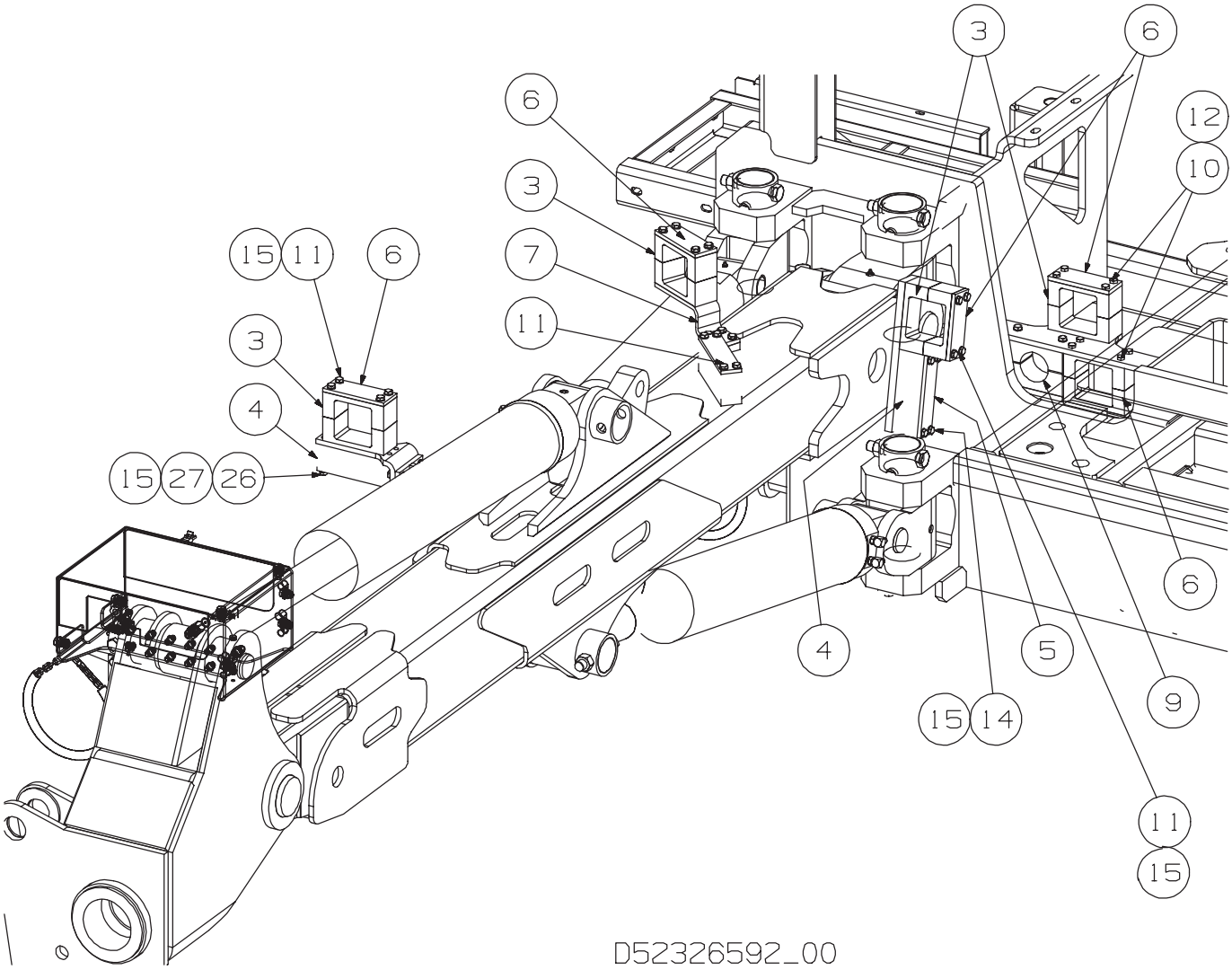
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52326592 BOOM HOSE RETAINER ASSEMBLY



1 NOT SHOWN
8 NOT SHOWN
16 NOT SHOWN
17 NOT SHOWN
18 NOT SHOWN
19 NOT SHOWN
20 NOT SHOWN
21 NOT SHOWN
22 NOT SHOWN

52326592 BOOM HOSE RETAINER ASSEMBLY



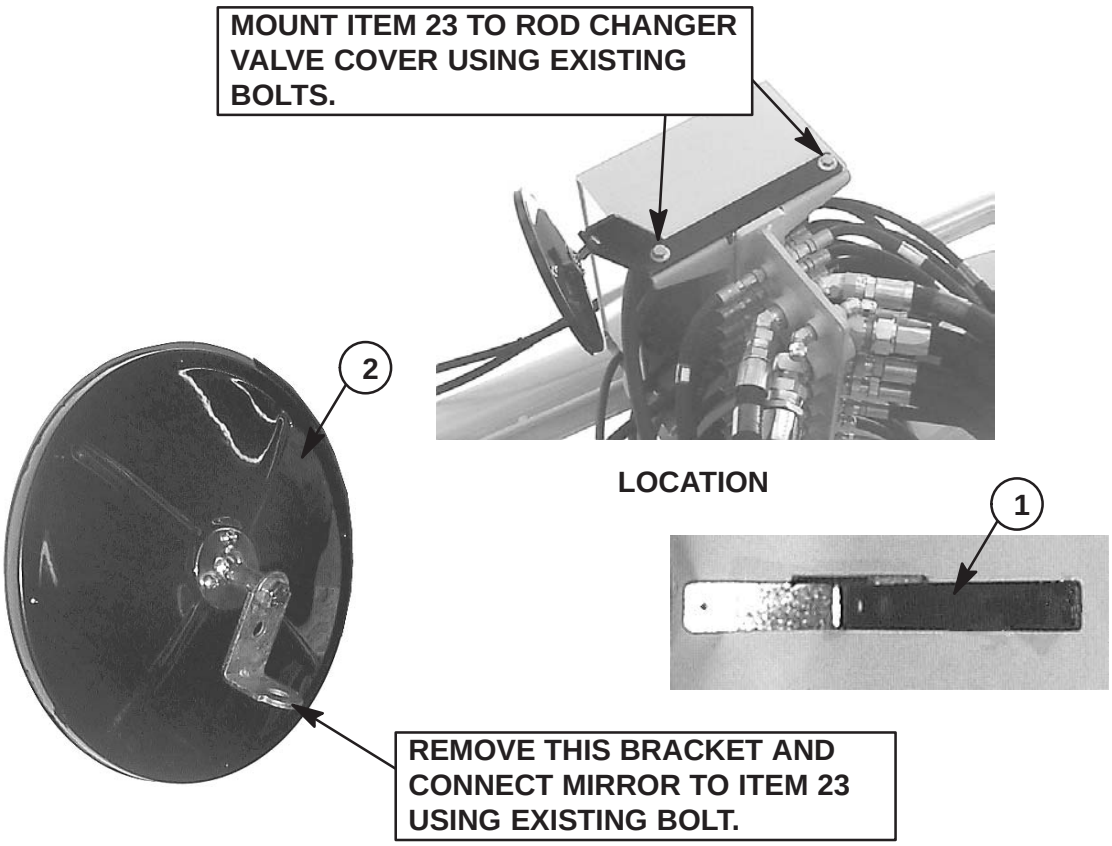
Ingersoll-Rand

52326592 BOOM HOSE RETAINER ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52326600	1	VALVE ASM,ROD CHANGER *REFER TO PAGE 9.14–1*	
2	52326618	1	BOOM BULKHEAD ASM *REFER TO PAGE 4.1–1*	
3	51776391	10	CLAMP,HOSE	
4	51776409	3	CLAMP,HOSE	
5	51776417	3	PLATE,HOSE CLAMP	
6	51776425	5	PLATE,HOSE CLAMP	
7	51909059	1	BRACKET,HOSE CLAMP	
8	52326634	1	BRACKET,HOSE CLAMP	
9	56943699	1	CLAMP ASSY,3 TUBE	
10	96727300	8	NUT	
11	96714803	12	CAPSCREW	
12	96727342	8	CAPSCREW	
13	96726914	4	BOLT	
14	96704739	8	BOLT	
15	96701982	24	WASHER	
16	96705652	4	LOCKNUT	
17	96701966	4	CAPSCREW	
18	96702535	8	WASHER	
19	52308681	6	STRAP,HOSE	
20	52080025	20	TIE,LASHING CABLE	
21	52080033	10	TIE,LASHING CABLE	
22	57358145	2	CABLE, HOSE RESTRAINT	
23	51783017	3	SHACKLE,CHAIN	
24	57708679	2	CHAIN	
25	03241395	1	HOSE BULK	
26	96714761	4	CAPSCREW	
27	96727300	4	NUT	
28	57714230	1	CHAIN	
29	03241395	1	HOSE BULK	

52326592 BOOM HOSE RETAINER ASSEMBLY

57705089 MIRROR ASSEMBLY



LOCATION

RIGHT SIDE MIRROR ASSEMBLY

57705089 MIRROR ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52122777	1	BRACKET,MIRROR	
2	51994770	1	MIRROR,CONVEX	

57699209 GUIDE ASSEMBLY, 4M

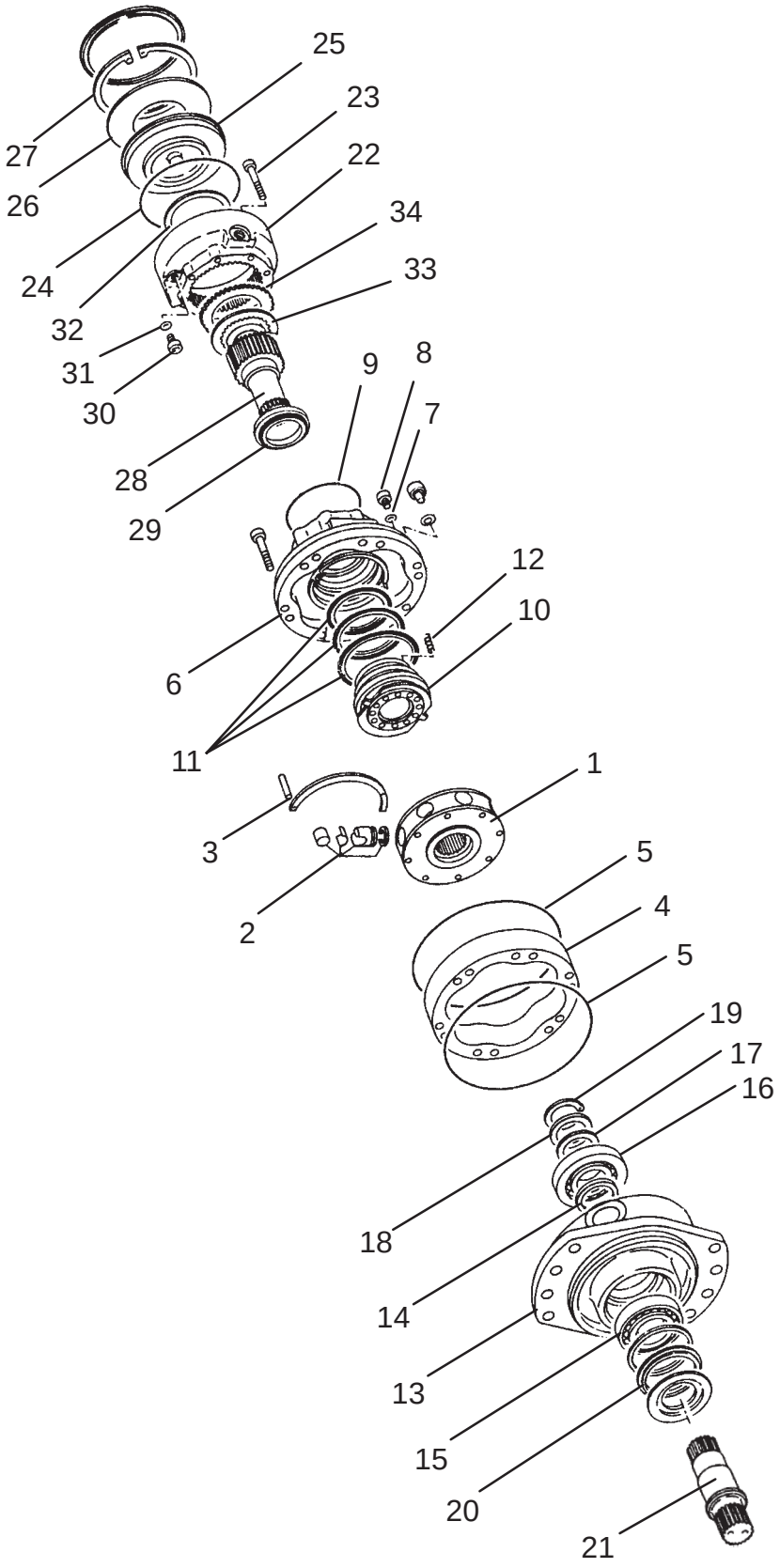
There is no drawing available at this time.

57699209 GUIDE ASSEMBLY, 4M

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
5	52325404	1	GUIDE REST ASSY *REFER TO PAGE 2.10–1*	
8	52324944	1	BOOM ASSEMBLY *REFER TO PAGE 5.11–1*	
9	52326592	1	HOSE RETAINING ASM,BOOM *REFER TO PAGE 4.2–1*	
10	57714693	1	GUIDE ASSEMBLY *REFER TO PAGE 5.10–1*	
12	57705121	1	ROD CHANGER ASSEMBLY *REFER TO PAGE 5.4–1*	
14	51873842	1	GUIDE HOSE ROUTING ASY *REFER TO PAGE 5.11–1*	
17	51862415	1	HOSE CARRIER ASSY *REFER TO PAGE 5.13–1*	
18	57714602	1	GUIDE EXTENSION ASSY *REFER TO PAGE 5.15–1*	
66	57668071	3	PLUG	
67	54530993	9	SOCKET	
68	57678104	3	WEDGE	
69	57673444	1	GUIDE WIRING ASSY *REFER TO PAGE 12.0–1*	
71	57673469	1	HARNESS, ROD CHANGER WIRING *REFER TO PAGE 12.2–1*	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

51780617 HYDRAULIC FEED MOTOR



51780617 HYDRAULIC FEED MOTOR

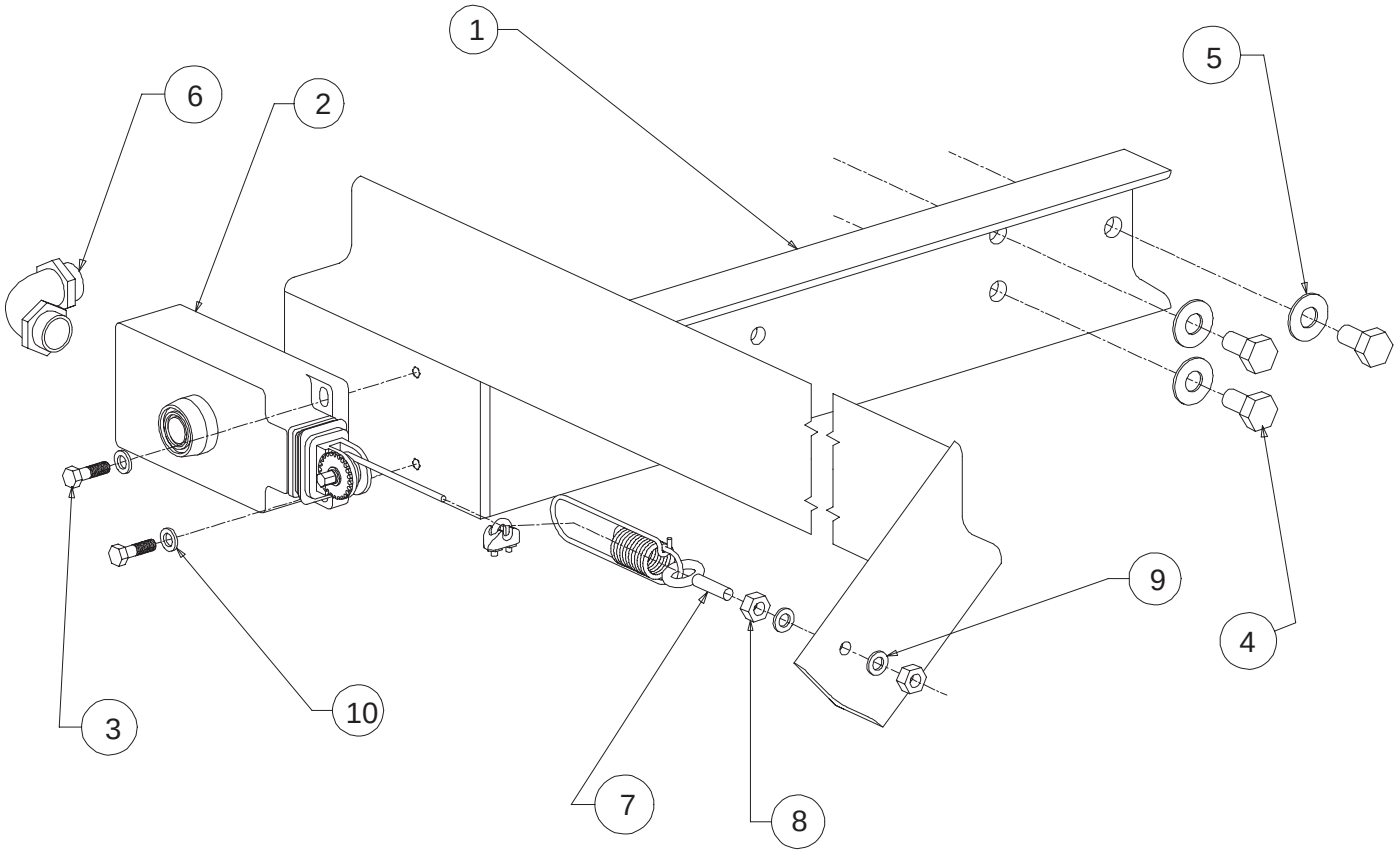
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51949196	1	BLOCK, CYLINDER	
2	51949204	8	.PISTON	
3	51949212	1	.KIT, PISTON REPAIR	
4	51949220	1	CAM	
5	51728517	1	.O–RING, METRIC	
	51949246	1	PLATE	
6	51949253	1	.PLATE, COVER	
7	51949279	2	.WASHER	
8	51949287	2	.SCREW	
9	51949295	1	.SEAL	
10	51949303	1	.VALVE	
11	51949311	1	.RING, SEAL	
12	51949329	9	.SPRING	
	51949394	1	ASSEMBLY, SUPPORT	
13	51949402	1	.SUPPORT	
14	51949410	1	.SEAL, SHAFT (INNER)	
15	51949428	1	.BEARING	
16	51949436	1	.BEARING	
17	51949444	1	.SET, SHIM	
18	51949451	1	.WASHER	
19	51949469	1	.RING, SNAP	
20	51949477	1	.SEAL, SHAFT (OUTER)	
21	51949485	1	.SHAFT	
	51949493	1	ASSEMBLY, BRAKE	
22	51949501	1	.HOUSING, BRAKE	
23	51949519	8	.SCREW	
24	51949527	1	.O–RING	
25	51949535	1	.PISTON, BRAKE	
26	51949543	1	.WASHER, SPRING	
27	51949550	1	.RING, SNAP	
28	51949568	1	.SHAFT, BRAKE	
29	51949576	1	.KIT, BRAKE	
30	51949584	2	.SCREW, BLEED	
31	51949592	2	.SEAL	
32	XX	1	.GEAR (THIS PART NOT AVAILABLE SEPARATELY, ORDER GEAR SET)	
33	XX	1	.GEAR (THIS PART NOT AVAILABLE SEPARATELY, ORDER GEAR SET)	
34	XX	1	.GEAR (THIS PART NOT AVAILABLE SEPARATELY, ORDER GEAR SET)	
	51949600	1	.SET, GEAR	

NOTE: REMANUFACTURED FEED MOTOR IS AVAILABLE BY ORDERING 52297793.

NOTE: ORDER PART NUMBER 52080041 FOR MOTOR BRAKE COVER KIT.

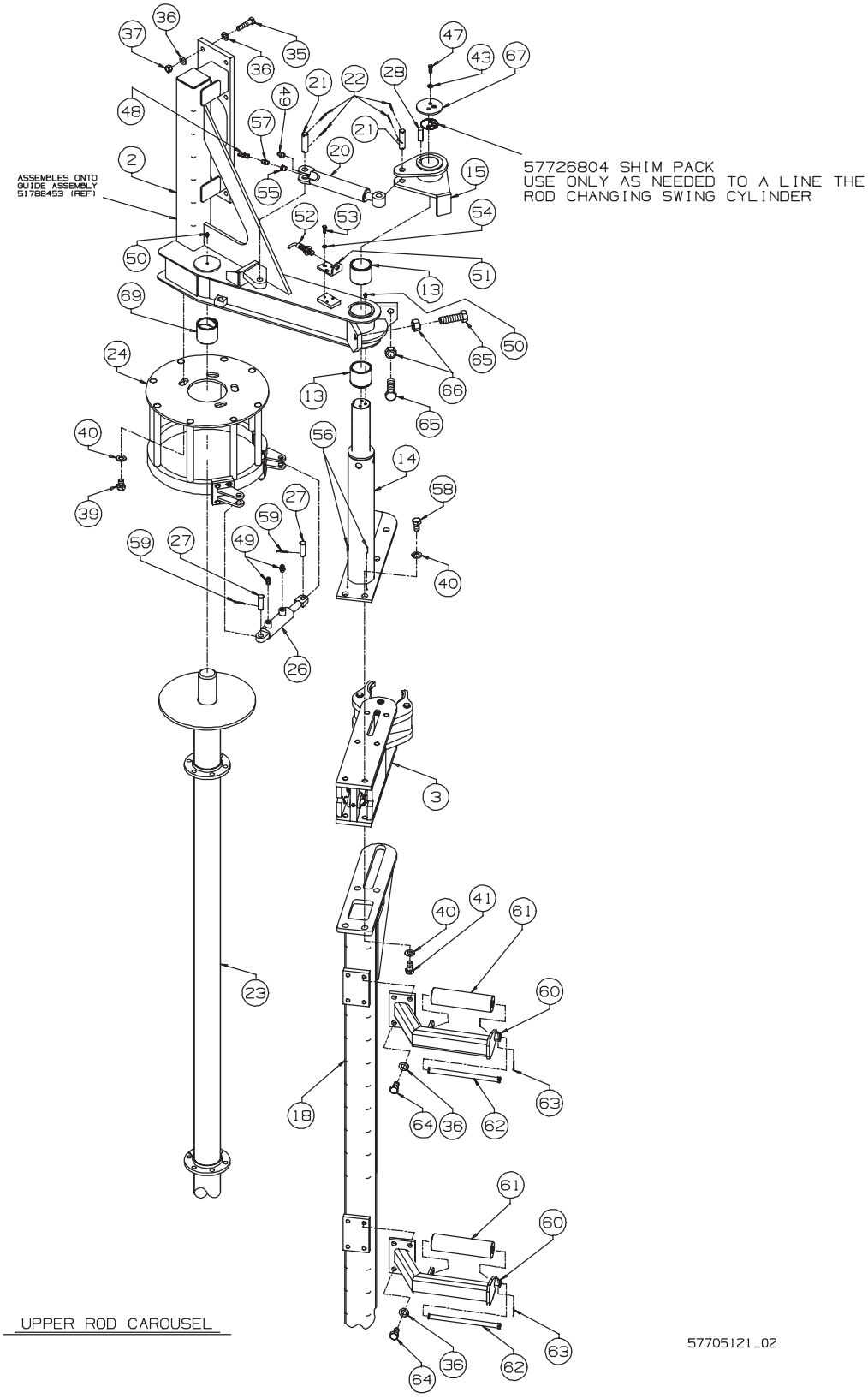
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

51994937 SAFETY DRIP WIRE ASSEMBLY

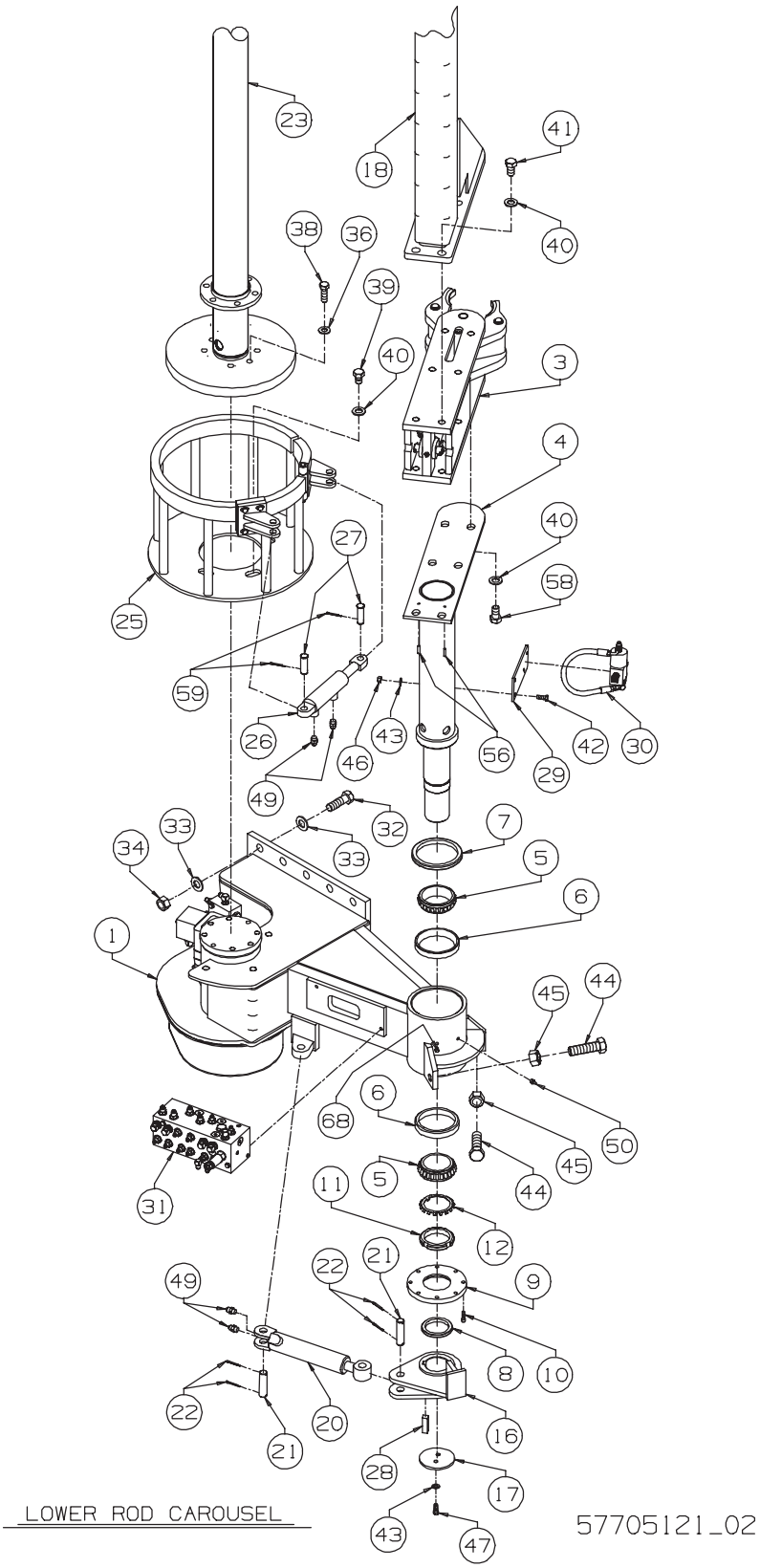


REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51994218	1	BRACKET, TRIP WIRE	
2	86415650	1	SWITCH, SAFETY TRIP WIRE (INCLUDES: SWITCH, WIRE CABLE, SPRING, SPRING CABLE END & WIRE THIMBLE)	
	57662868	1	.SPRING, SAFETY	
3	96703012	2	CAPSCREW	
4	96712146	3	CAPSCREW	
5	96700836	3	WASHER	
6	51874691	1	CONNECTOR	
7	51994952	1	EYEBOLT	
8	95077681	2	NUT	
9	95064655	2	WASHER	
10	96701289	2	WASHER	

57705121 ROD CHANGER ASSEMBLY



57705121 ROD CHANGER ASSEMBLY



57705121 ROD CHANGER ASSEMBLY

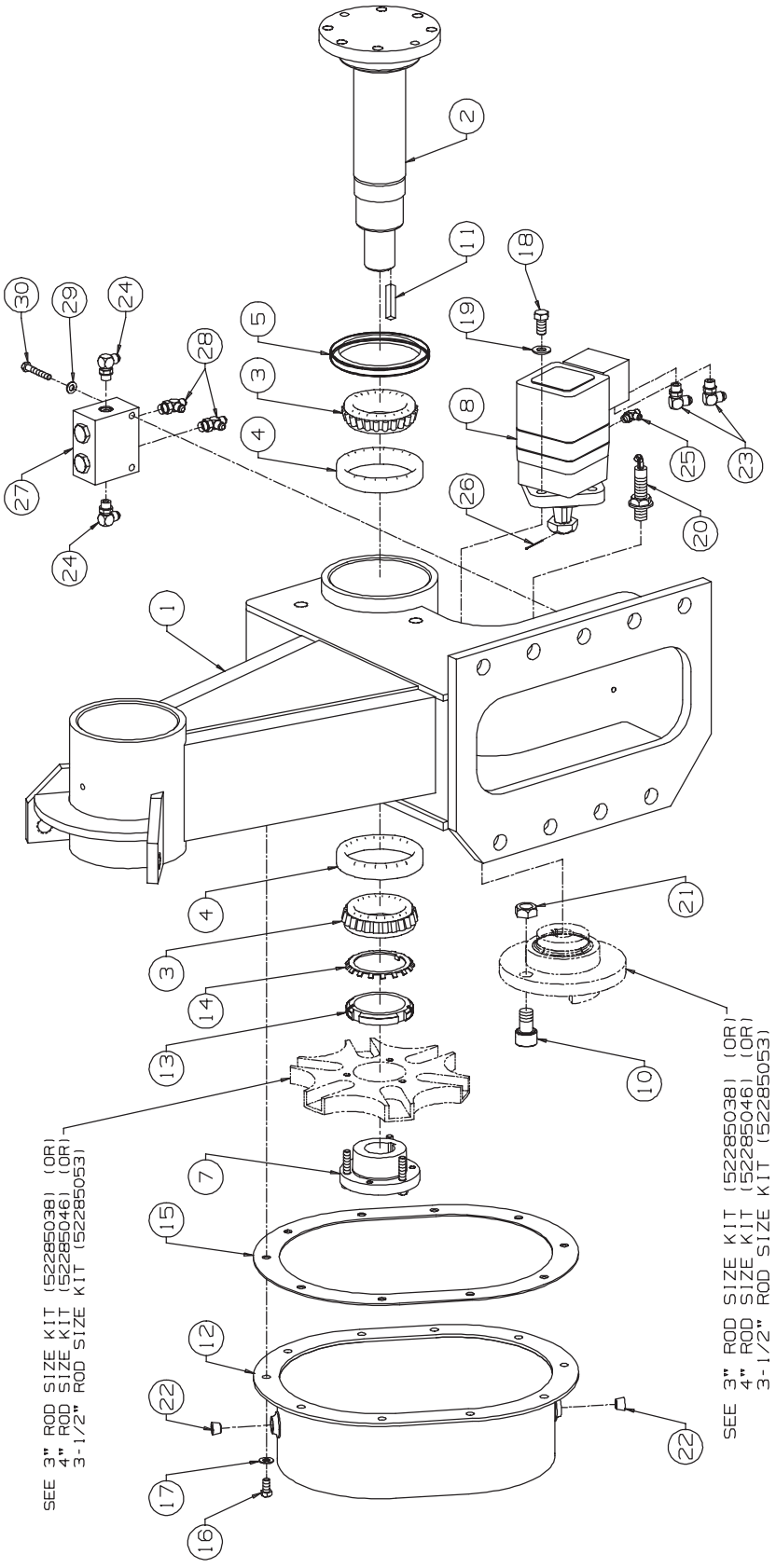
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52284957	1	ASSEMBLY, CAROUSEL DRIVE GROUP	
			REFER TO PAGE 5.5–1	
2	51780633	1	CAROUSEL, ROD (TOP WELDMENT)	
3	52284965	2	ASSEMBLY, GRIPPER	
			REFER TO PAGE 5.6–1	
4	51780674	1	PIVOT, BOTTOM ROD SWING	
5	95362190	2	CONE, BEARING	
6	95362158	2	CUP, BEARING	
7	51780567	1	SEAL, OIL	
8	51780559	1	SEAL, OIL	
9	51780591	1	RETAINER, SEAL	
10	96714621	8	CAPSCREW	
11	95209912	1	NUT, BEARNG LOCK	
12	95212114	1	WASHER	
13	51788594	3	BUSHING	
14	51780666	1	PIVOT, ROD SWING, TOP	
15	51780708	1	ROD SWING CLEVIS,TOP	
16	51780690	1	ROD SWING CLEVIS, BOTTOM	
17	51788222	2	PLATE, SPROCKET RETAINING	
18	51780682	1	PIVOT, MIDDLE ROD SWING	
20	51788578	2	CYLINDER, ROD CHANGER HYDRAULIC	
	51944494	1	.KIT, SEAL	
21	51788636	4	PIN	
22	95002705	8	PIN, COTTER	
23	52286622	1	ROD, CAROUSEL	
24	52329950	1	RETAINER,TOP CAROUSEL	
25	52329968	1	RETAINER,CAROUSEL BOTTOM	
26	51873891	2	CYLINDER, HYDRAULIC DOOR	
	51944536	1	.KIT, SEAL	
27	51873875	4	PIN, HEADED CYLINDER	
28	95293130	2	KEY	
29	51909372	1	MOUNTING PLATE, NOZZLE	
30	51909398	1	ASSEMBLY, GREASER VALVE	
			REFER TO PAGE 5.7–1	
31	51909406	1	ASSEMBLY, ROD CHANGER MANIFOLD	
			REFER TO PAGE 9.7–1	
32	96705280	9	CAPSCREW, HEX HEAD	
33	96745922	18	WASHER	
34	96703673	9	NUT, HEX	

57705121 ROD CHANGER ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
35	96702030	8	CAPSCREW, HEX HD	
36	96700968	26	WASHER, FLAT	
37	96703657	8	NUT, HEX	
38	96700216	6	SCREW, HEX HD	
39	96701875	7	CAPSCREW	
40	96700976	27	WASHER, FLAT	
41	96705298	8	CAPSCREW, HEX HD	
43	96700836	8	WASHER	
44	96711957	2	CAPSCREW, HEX. HD.	
45	51948602	2	NUT, JAM	
46	96701990	2	NUT, HEX	
47	96712146	4	CAPSCREW	
48	95653002	1	ELBOW	
49	95371258	7	ADAPTER	
51	51611390	1	BRACKET, PROXIMITY SWITCH	
51	95201547	1	FITTING, GREASE	
52	51780575	1	SENSOR, OIL TIGHT PROXIMITY	
53	96714613	3	SCREW, HEX HD	
54	96700828	3	WASHER	
55	95147674	1	REDUCER	
56	95069522	4	PIN	
57	95365086	1	ADAPTER	
58	96701875	12	CAPSCREW	
59	03167228	4	COTTER	
60	51999878	1	BRACKET, ROLLER	
61	51999886	1	ROLLER, HOSE CARRIER	
62	51999894	1	PIN, ROLLER	
63	95900767	1	PIN, COTTER	
64	96703152	4	CAPSCREW	
65	96700893	2	CAPSCREW	
66	51326759	2	NUT	
67	57699068	1	PLATE, SPROCKET RETAINING	
68	95305512	1	BREATHER	
69	57716052	1	BUSHING	
70	57726804	0	SHIM PACK, SPRKT RETAIN.	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52284957 CAROUSEL DRIVE GROUP ASSEMBLY

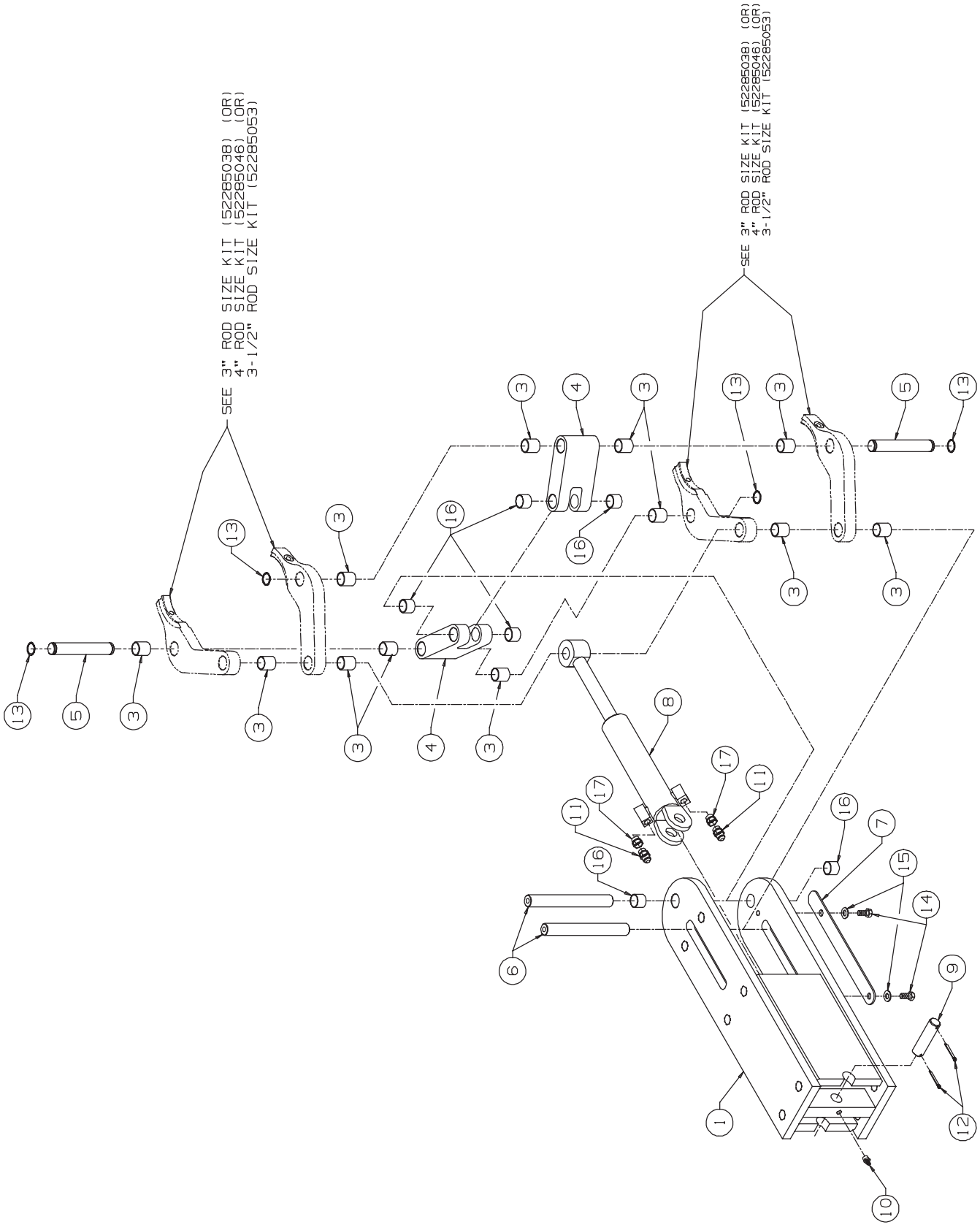


52284957 CAROUSEL DRIVE GROUP ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51780500	1	BASE, ROD CAROUSEL	
2	51780492	1	SPINDLE, ROD CAROUSEL	
3	95362190	2	CONE, BEARING	
4	95362158	2	CUP, BEARING	
5	51780567	1	SEAL, OIL	
7	51780526	1	BUSHING, SPLIT TAPER	
8	51780583	1	ASSEMBLY, ROD CHANGER ROTATION HYDRAULIC MOTOR *REFER TO PAGE 5.8–1*	
10	51780534	1	ROLLER, TRACK	
11	95263976	1	KEY	
12	51780518	1	OIL PAN, ROD INDEXER	
13	95209912	1	NUT, BEARNG LOCK	
14	95212114	1	WASHER	
15	51780609	1	GASKET, OIL PAN	
16	96712146	10	CAPSCREW	
17	96700836	10	WASHER	
18	96714886	4	CAPSCREW	
19	51616209	4	WASHER, SEAL	
20	51780575	1	SENSOR, OIL TIGHT PROXIMITY	
21	95245296	1	NUT, HEX JAM	
22	95730545	2	PLUG, PIPE	
23	95365094	2	ADAPTER	
24	95329975	2	ELBOW	
25	95147971	1	TEE	
26	95231494	1	PIN, COTTER	
27	50930452	1	VALVE, CHECK	
28	95453346	2	TEE	
29	96700828	2	WASHER	
30	96714654	2	CAPSCREW	
31	51908804	2	ADAPTER, RESTRICTOR	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52284965 GRIPPER ASSEMBLY

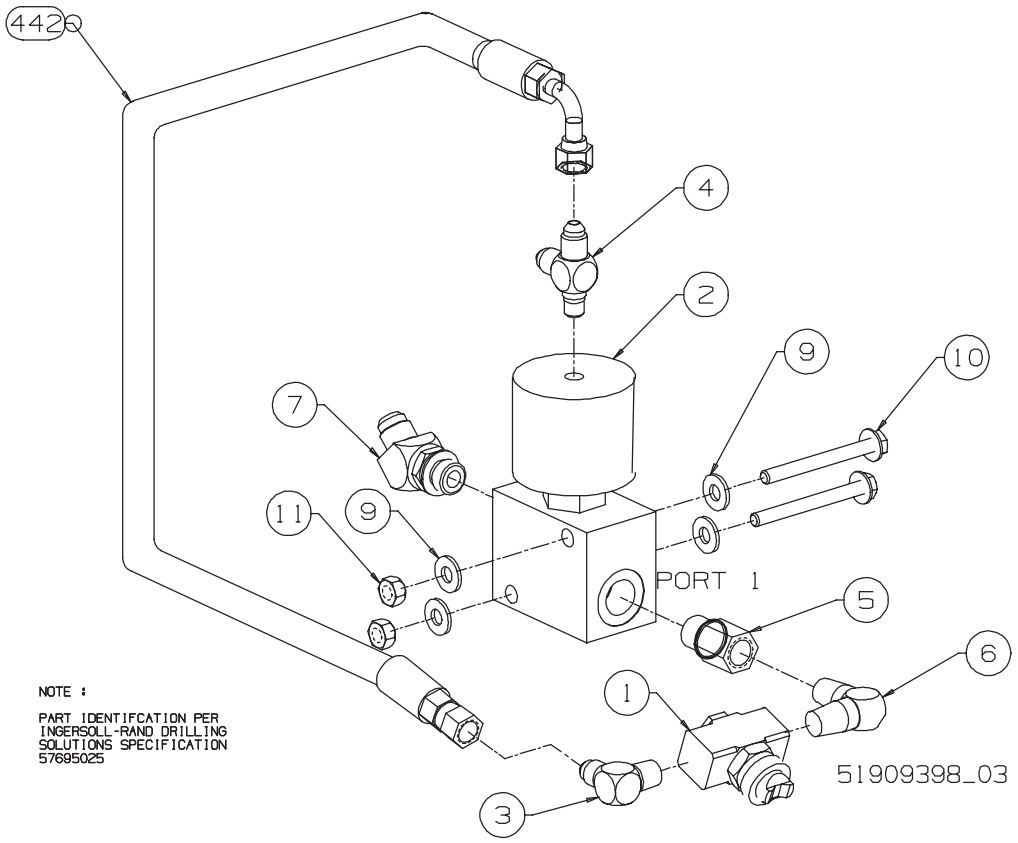


52284965 GRIPPER ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51788529	1	HOUSING, ROD GRIPPER	
3	51788552	12	BUSHING	
4	51788511	2	LINKAGE, GRIPPER	
5	51788545	2	PIN	
6	51788537	2	PIN	
7	51788560	1	PLATE, COVER	
8	51788578	1	CYLINDER, GRIPPER ARM	
	51944494	1	.KIT, SEAL	
9	51788636	1	PIN	
10	95201547	1	FITTING, GREASE	
11	51916096	2	ADAPTER, LONG STRAIGHT	
12	95002705	2	PIN, COTTER	
13	51909364	4	RING, RETAINING, SPIROLOK	
14	96712146	2	CAPSCREW	
15	96700836	2	WASHER	
16	51910875	6	BUSHING	
17	95147674	2	REDUCER	

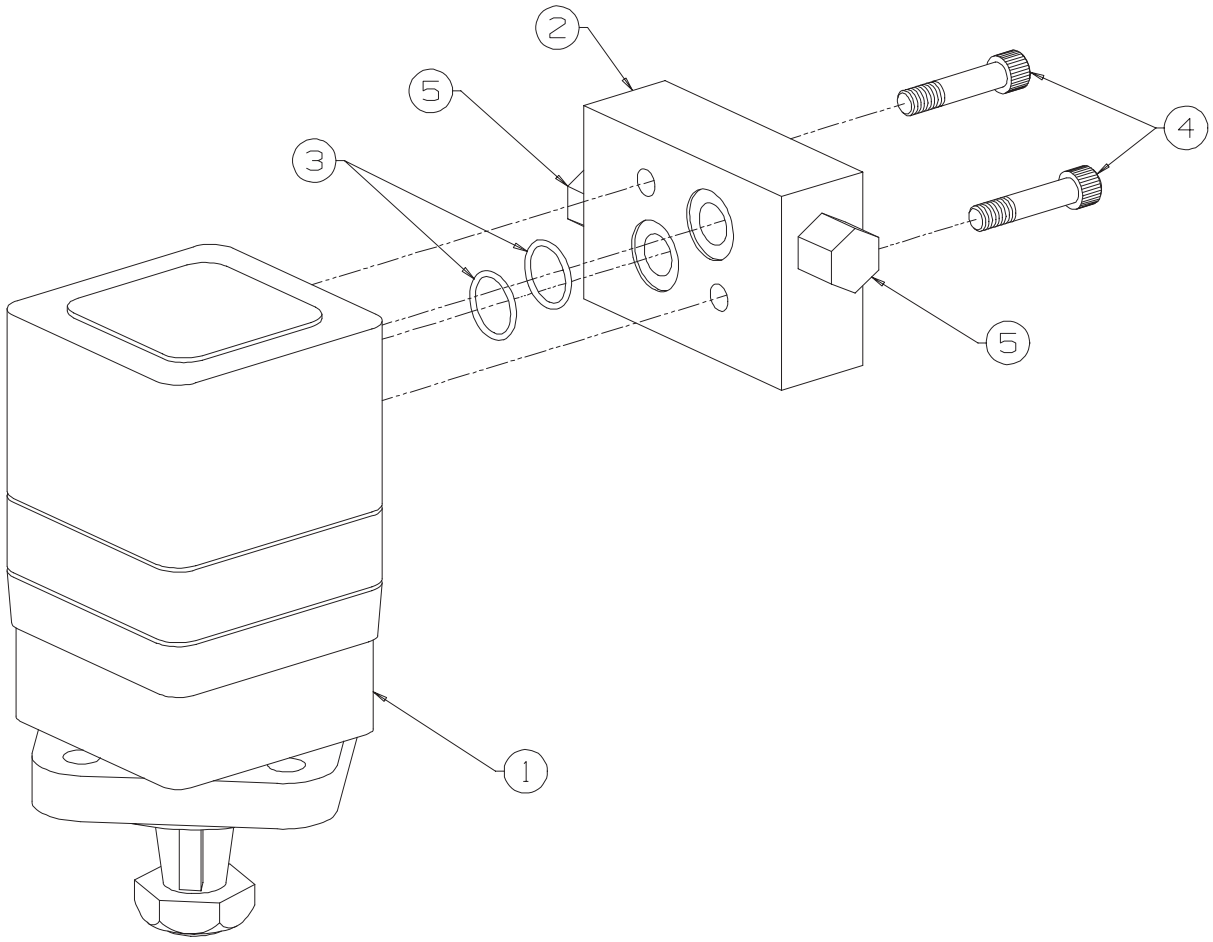
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

51909398 GREASER VALVE ASSEMBLY



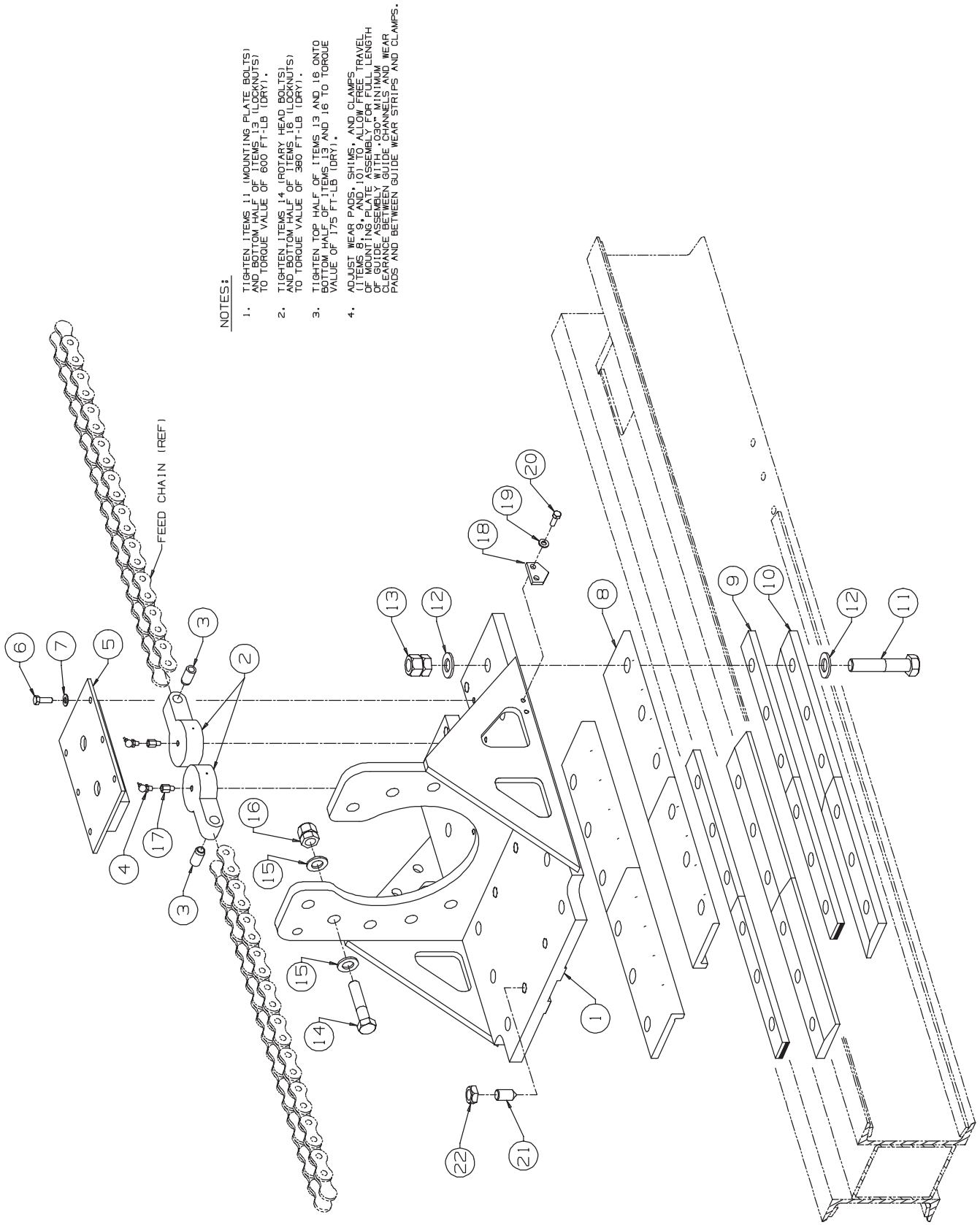
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51619088	1	NOZZLE, SPRAY	
	51948529	1	.AIR CAP, NOZZLE	
	51948537	1	.RETAINING RING, NOZZLE	
2	52130044	1	VALVE, PILOT OPERATED GREASER	
3	95293403	1	ELBOW	
4	95002598	1	TEE	
5	95655064	1	ADAPTER	
6	95364469	1	FITTING, HYD	
7	95003273	1	ELBOW	
9	96701289	4	WASHER	
10	96714555	2	CAPSCREW	
11	96703640	2	NUT, HEX	
442	51916005	0	HOSE ASSY	

51780583 ROD CHANGER ROTATION HYDRAULIC MOTOR



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51909133	1	MOTOR, HYDRAULIC	
2	51909141	1	MANIFOLD, HYDRAULIC BARE	
3	95086484	2	O–RING	
4	96700398	2	CAPSCREW	
5	51918183	2	CARTRIDGE, FLOW CONTROL	

51862365 ROTARY HEAD MOUNTING PLATE ASSEMBLY

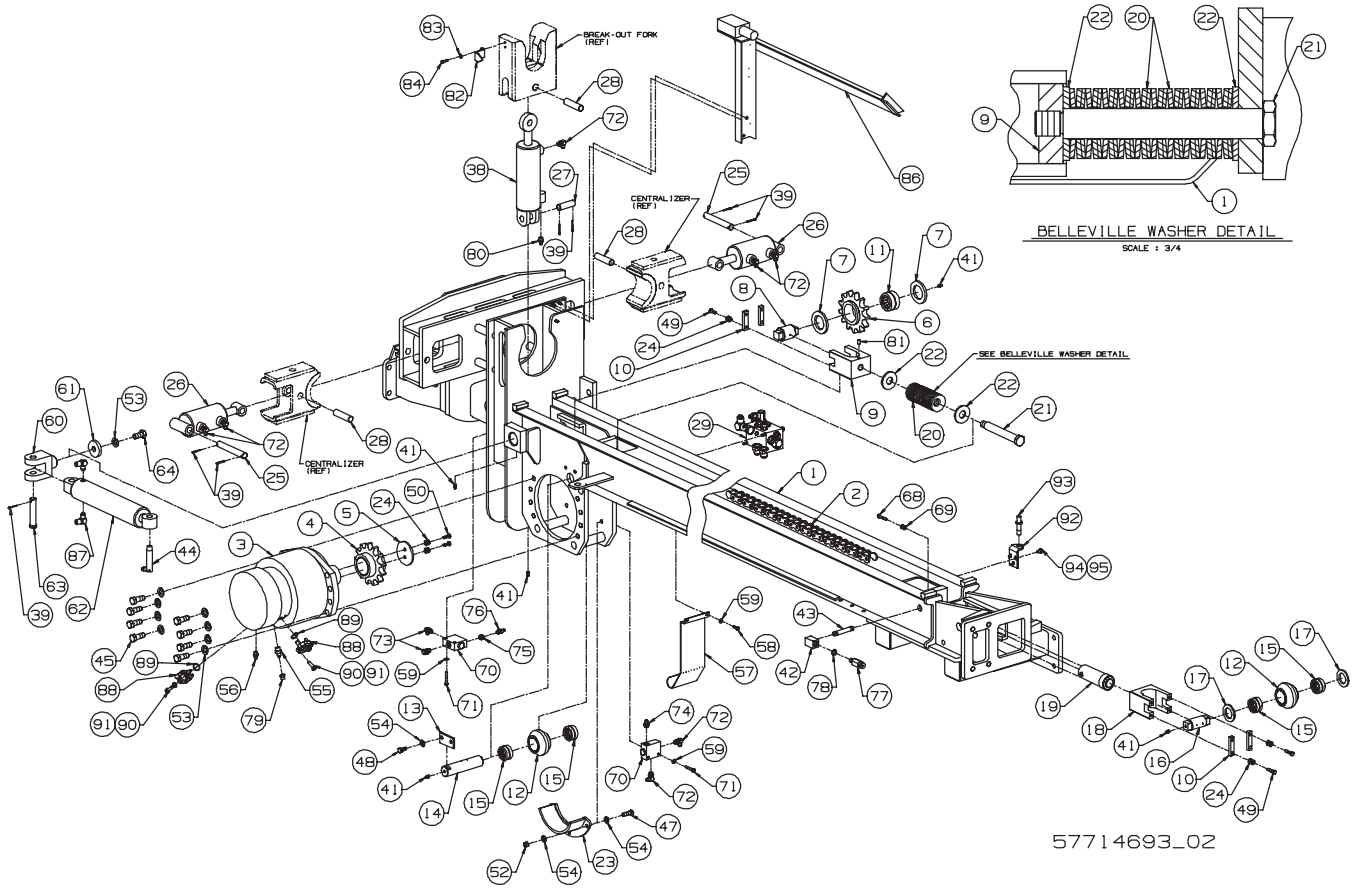


51862365 ROTARY HEAD MOUNTING PLATE ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51782498	1	PLATE, MOUNTING	
2	51616621	2	ANCHOR, CHAIN	
3	51616647	2	BUSHING	
4	95447850	2	FITTING, GREASE	
5	51782514	1	COVER, CHAIN ANCHOR	
6	96714944	6	CAPSCREW	
7	96700836	6	WASHER	
8	51782522	4	PAD, WEAR	
9	51862340	4	SHIM PACK, GUIDE EXTENSION CLAMP	
10	51782506	4	CLAMP STRIP	
11	96705181	12	CAPSCREW	
12	96701305	24	WASHER	
13	51782308	12	NUT, LOCK	
14	96704044	10	CAPSCREW	
15	96700976	20	WASHER, FLAT	
16	51607794	10	NUT, DRAKE LOCK	
17	51862373	2	ADAPTER	
18	52316031	1	POINTER, BREAKOUT FORK	
19	92304609	2	WASHER, FLAT	
20	96714605	2	CAPSCREW	
21	03190550	8	SETSCREW	
22	95076907	8	NUT	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57714693 GUIDE ASSEMBLY



57714693 GUIDE ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51788461	1	WELDMENT, GUIDE	
2	51780625	1	CHAIN, FEED	
3	51780617	1	MOTOR, HYDRAULIC FEED	
			REFER TO PAGE 5.1–1	
4	51788362	1	SPROCKET, DRIVE	
5	51788222	1	PLATE, SPROCKET RETAINING	
6	51618817	1	SPROCKET, IDLER	
7	51715795	2	WASHER, THRUST	
8	51618825	1	PIN	
9	51618858	1	YOKE	
10	51618890	4	CAP, YOKE	
11	51618833	1	BEARNG, NEEDLE	
12	51788255	2	IDLER, CHAIN	
13	51618767	1	PLATE, KEEPER	
14	51788289	1	PIN, IDLER	
15	51618809	4	BEARING	
16	51788263	1	PIN, IDLER	
17	51788230	2	WASHER, THRUST	
18	51788297	1	YOKE, IDLER	
19	51780377	1	CYLINDER, GREASE	
	51792042	1	.KIT, SEAL	
20	51717627	30	WASHER, BELLEVILLE	
21	51788248	1	BOLT, TENSIONING	
22	51618882	2	WASHER, SPRING SEAT	
23	51713717	1	RETAINER, CHAIN	
24	51377398	20	WASHER	
25	51005486	2	PIN	
26	51909117	2	CYLINDER, HYDRAULIC CENTRALIZER	
	51944486	1	.KIT, SEAL	
27	51788305	1	PIN, FORK CYLINDER	
28	51005452	3	PIN	
29	51909448	1	ASSEMBLY, FEED CONTROL MANIFOLD	
			REFER TO PAGE 9.3–1	
38	51788339	1	CYLINDER, BREAKOUT FORK	
	51944502	1	.KIT, SEAL	
39	95002705	11	PIN, COTTER	
41	95201281	5	FITTING	
42	51866333	1	MANIFOLD, GREASE	
43	95280707	1	NIPPLE	
44	51862696	1	PIN, BALL LOCK	
45	96703343	8	CAPSCREW	

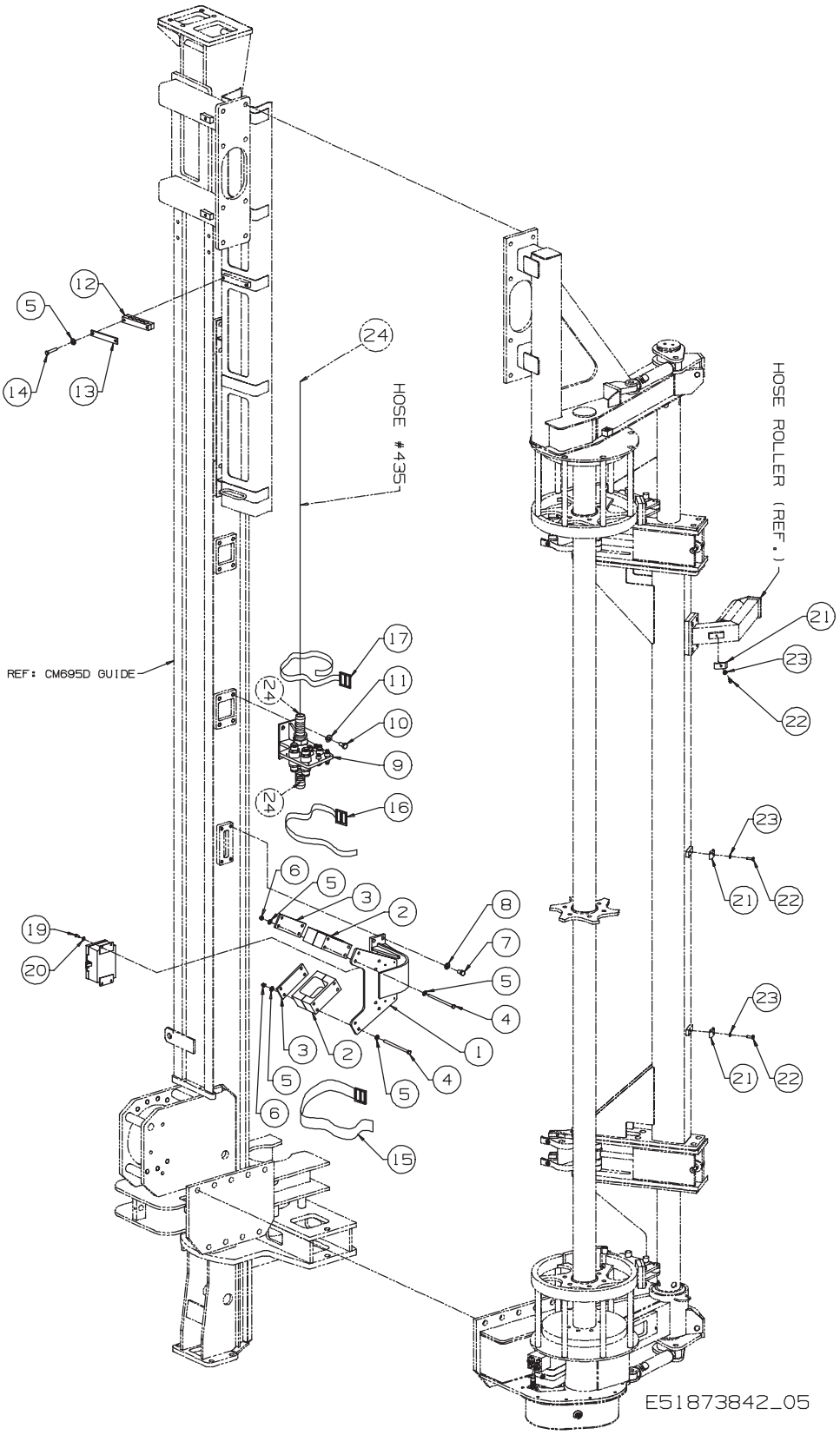
57714693 GUIDE ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
47	96714894	3	CAPSCREW	
48	96714829	2	CAPSCREW	
49	96714746	8	CAPSCREW	
50	96712146	2	CAPSCREW	
51	96727136	8	NUT	
52	96702857	3	NUT, HEX	
53	96700976	25	WASHER, FLAT	
54	96700844	8	WASHER	
55	51377497	1	ADAPTER	
56	51377505	1	ADAPTER	
57	51874196	1	COVER, FEED CHAIN	
58	96714605	2	CAPSCREW	
59	96700828	6	WASHER	
60	51874162	1	PIVOT, CHAIN WRENCH CYLINDER	
61	51874170	1	PLATE, RETAINING	
62	57155988	1	CYLINDER, HYDRAULIC CHAIN WRENCH	
	57156549	1	.KIT, SEAL	
63	51779536	1	PIN, CYLINDER	
64	96700901	1	CAPSCREW	
68	95943668	2	CAPSCREW	
69	51377406	4	WASHER, 5/16	
70	50930460	2	VALVE, CHECK	
71	96714654	4	CAPSCREW	
72	95329975	7	ELBOW	
75	95147674	1	REDUCER	
76	95147971	1	TEE	
77	51236933	1	FITTING	
78	51236925	1	GASKET	
79	51028751	1	ADAPTER	
80	95365078	1	ADAPTER	
81	96704119	1	SCREW, SET	
82	51948628	1	POINTER, STEEL FLATS	
83	96701289	2	WASHER	
84	96714548	2	CAPSCREW	
86	51994937	1	ASSEMBLY, SAFETY TRIP WIRE	
			REFER TO PAGE 5.3–1	
87	95356853	2	ADAPTER	
88	51782654	4	FLANGE, SPLIT	
88	52137171	1	SKIRT,DUST POT,4”	

57714693 GUIDE ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
89	51782647	2	O–RING	
90	96702410	8	SCREW, HEX	
91	96700836	8	WASHER	
92	51611390	1	BRACKET, PROX. SWITCH	
93	51780575	1	SENSOR,OIL TIGHT PROXMTY	
94	96714613	3	SCREW	
95	96700828	3	WASHER	

51873842 GUIDE HOSE ROUTING ASSEMBLY

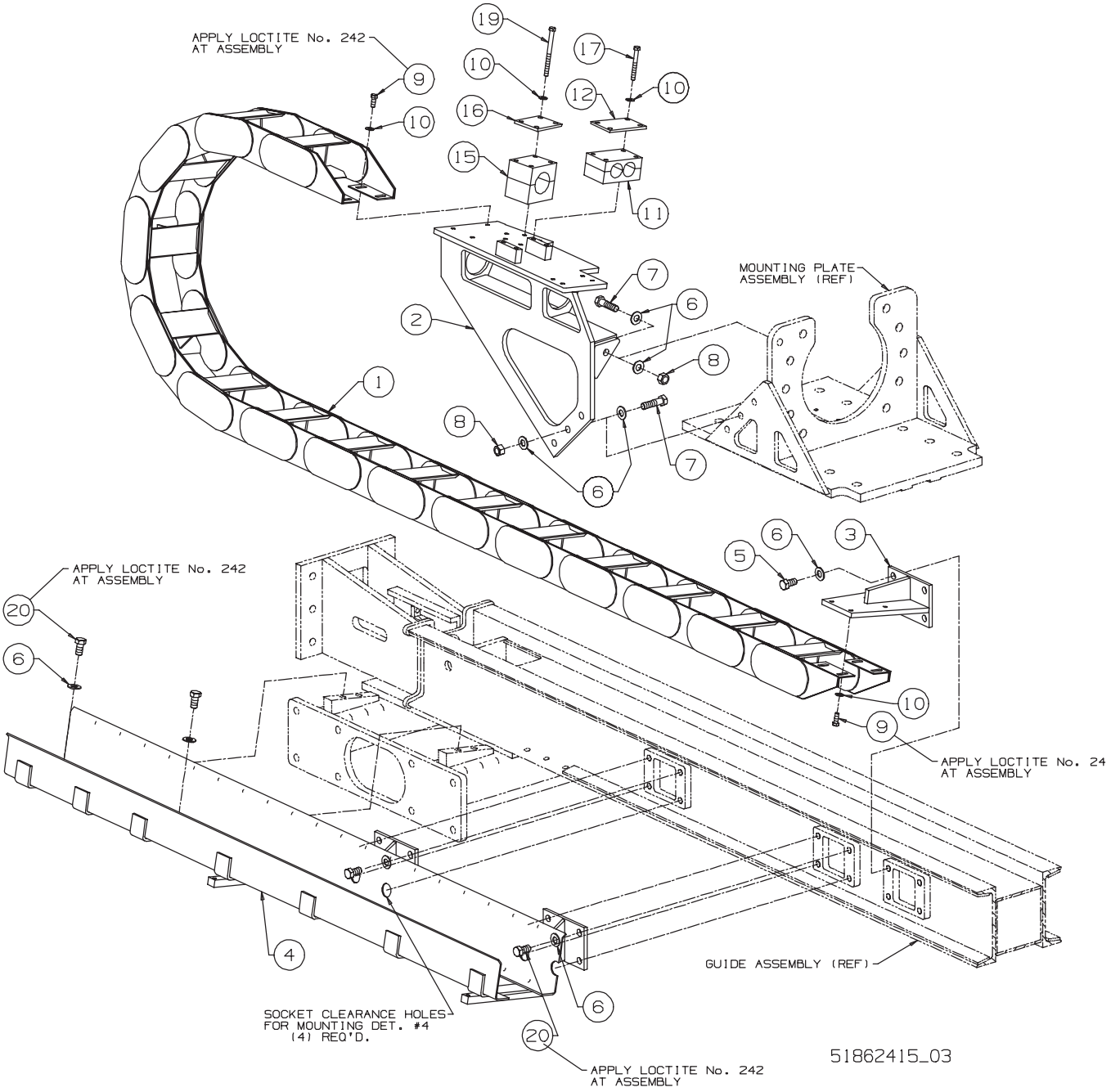


51873842 GUIDE HOSE ROUTING ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52119005	1	SUPPORT, HOSE	
2	51776391	4	CLAMP, HOSE	
3	51776425	2	PLATE, HOSE CLAMP	
4	96714811	8	CAPSCREW	
5	96700836	18	WASHER	
6	96704333	8	NUT, HEX, LOCK	
7	96714860	4	CAPSCREW	
8	96700844	4	WASHER	
9	51910701	1	ASSEMBLY, GUIDE HOSE BULKHEAD	
10	96703079	4	CAPSCREW	
11	96700968	4	WASHER, FLAT	
12	51958130	1	CLAMP, HOSE	
13	51958122	1	PLATE, HOSE CLAMP	
14	96705462	2	CAPSCREW	
15	52308681	6	STRA[	
16	52308681	6	STRAP	
17	52308681	6	STRAP	
19	96714548	4	CAPSCREW	
20	96701289	4	WASHER	
21	50034826	3	CLAMP	
22	96703046	3	SCREW	
23	96701289	3	WASHER	
24	50141720	3	CLAMP, HOSE	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

51862415 HOSE CARRIER ASSEMBLY

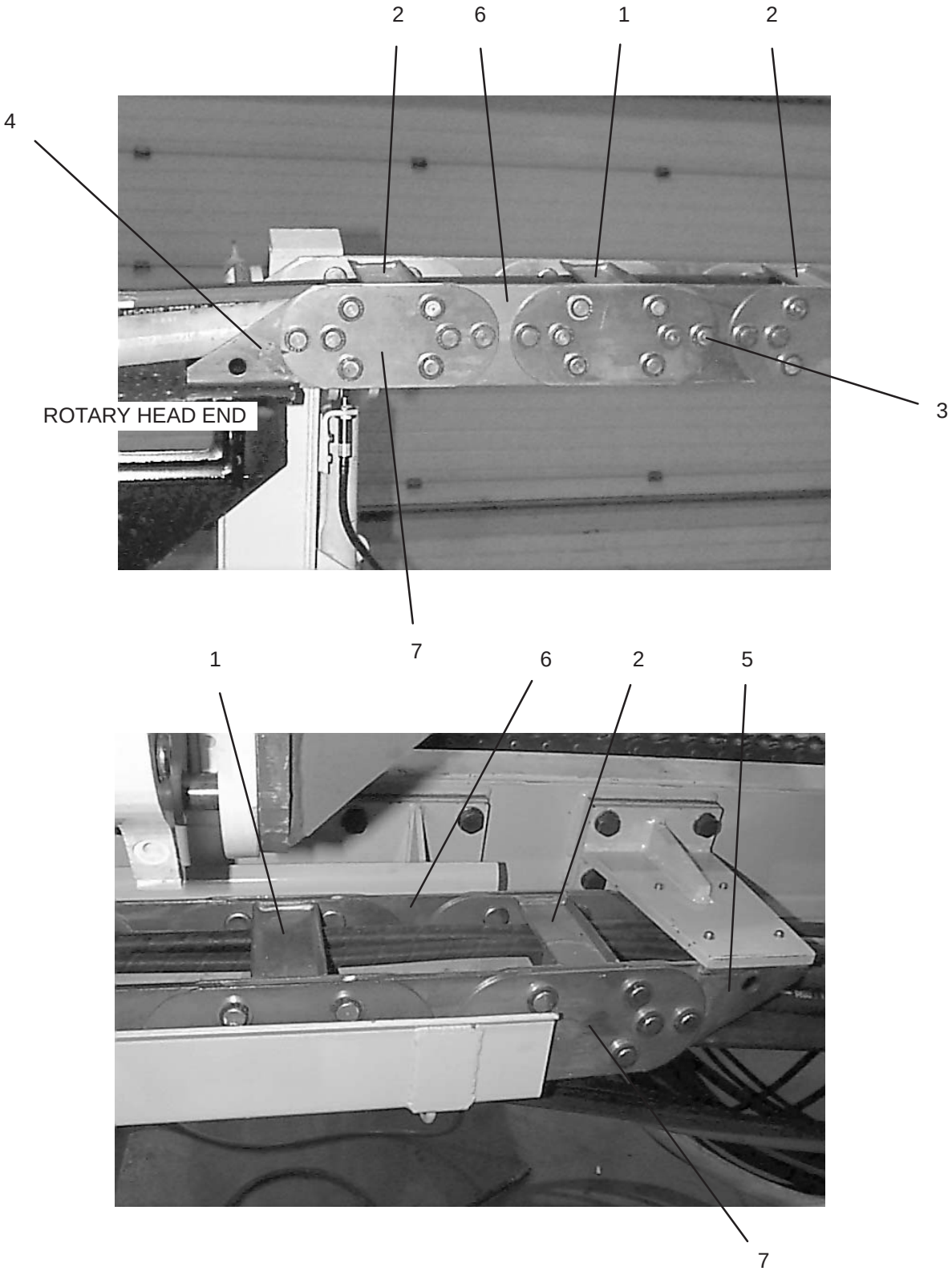


51862415 HOSE CARRIER ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51997740	1	HOSE CARRIER	
			REFER TO PAGE 5.14–1	
2	51788404	1	MOUNT, HOSE CARRIER, MOVING	
3	51788438	1	MOUNT, HOSE CARRIER, FIXED	
4	51788420	1	TRAY, HOSE CARRIER	
5	96703079	4	CAPSCREW	
6	96700968	24	WASHER, FLAT	
7	96700216	4	CAPSCREW	
8	96703657	4	NUT, HEX	
9	96702279	8	CAPSCREW	
10	96700836	16	WASHER	
11	51862647	1	CLAMP, HOSE, UPPER	
12	51862670	1	PLATE, HOSE CLAMP	
15	51862654	1	CLAMP, HOSE, MIDDLE	
16	51788412	1	PLATE, HOSE CLAMP	
17	96710488	4	CAPSCREW	
19	96714795	4	CAPSCREW	
20	96703426	10	CAPSCREW	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

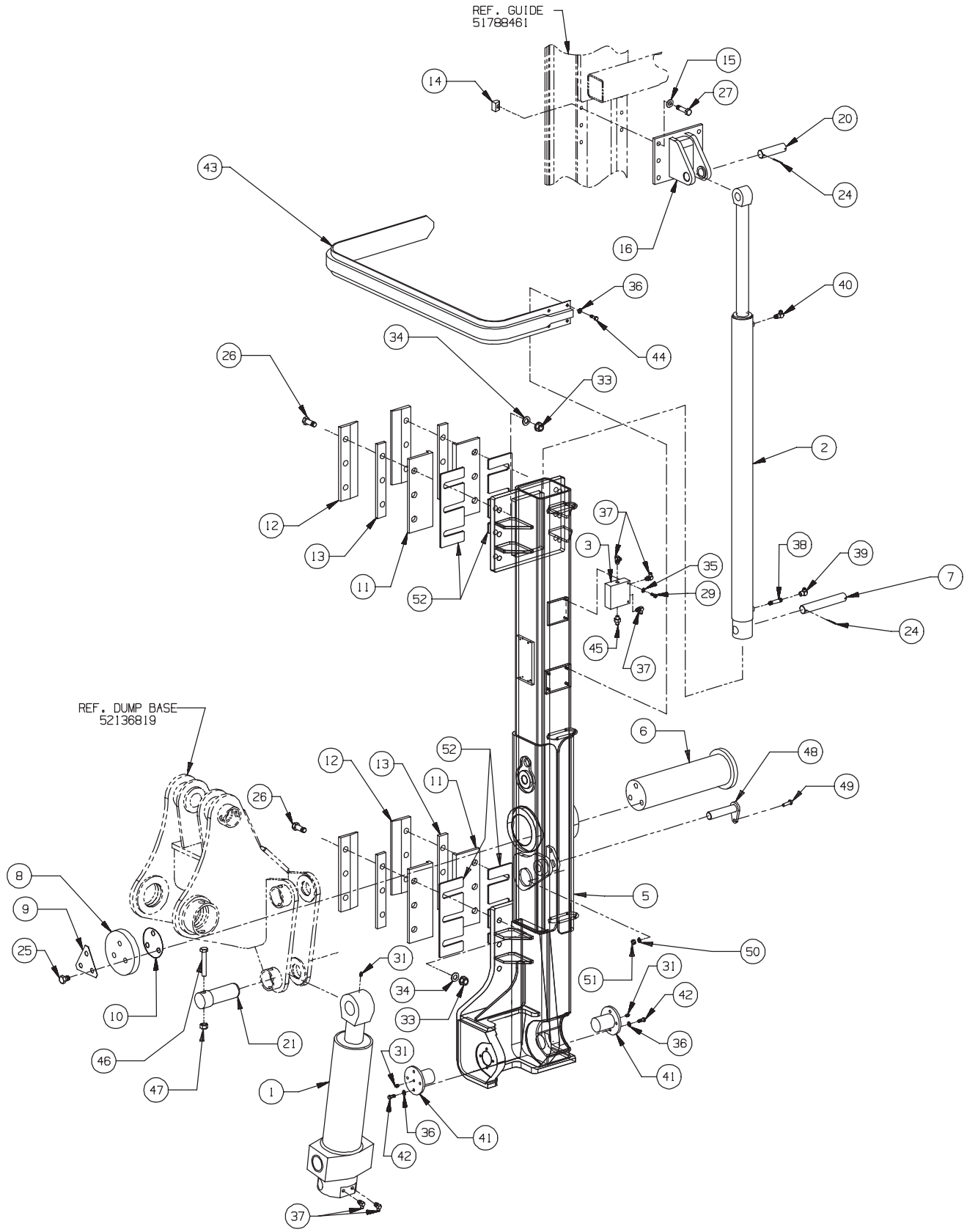
51997740 HOSE CARRIER



51997740 HOSE CARRIER

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52080124	7	WELDMENT, CARRIER (WITHOUT SEPARATOR PLATES)	
2	52080132	8	WELDMENT, CARRIER (WITH SEPARATOR PLATES)	
3	52080140	240	ASSEMBLY, LINK PIN	
4	57673378	1	FOOT, MOUNTING	
5	52080165	1	FOOT, MOUNTING	
6	52080173	56	LINK, RADIUS	
7	52080181	30	LINK, CARRIER	

57714602 GUIDE EXTENSION ASSEMBLY



57714602 GUIDE EXTENSION ASSEMBLY

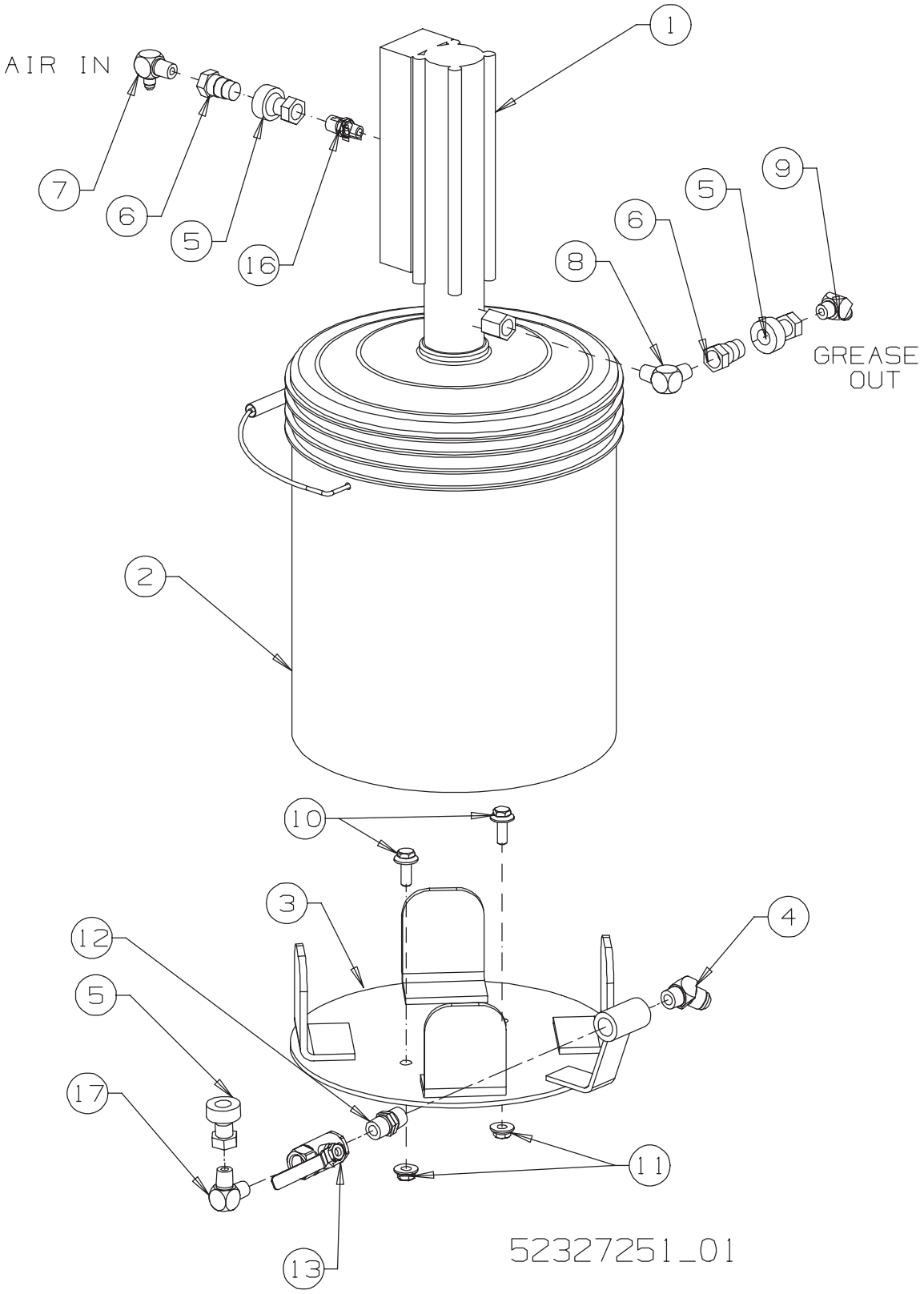
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57675977	1	CYLINDER, GUIDE SWING	
	51992436	1	,KIT, SEAL	
2	51992352	1	CYLINDER, GUIDE EXTENSION	
	51992451		.KIT, SEAL	
3	50930452	1	VALVE, CHECK	
5	52083052	1	WELDMENT, GUIDE EXTENSION TUBE	
6	51609196	1	PIN, SWING	
7	51862357	1	PIN, GUIDE EXTENSION CYLINDER	
8	51610723	1	PLATE, THRUST	
9	51610731	1	WASHER, LOCK	
10	51610749	1	SHIM PACK	
11	51782522	4	PAD, WEAR	
12	51782506	4	CLAMP STRIP	
13	51862340	4	SHIM PACK, GUIDE EXTENSION CLAMP	
14	51618619	6	NUT	
15	96700968	6	WASHER, FLAT	
16	51862225	1	ANCHOR, GUIDE EXTENSION	
20	51862332	1	PIN, GUIDE EXTENSION CYLINDER	
21	52282852	1	PIN, CYLINDER	
24	95093381	4	PIN, COTTER	
25	96703343	3	CAPSCREW	
26	96704077	12	CAPSCREW	
27	96701222	6	SCREW, HEX HEAD	
28	96714605	2	CAPSCREW	
29	96714654	2	CAPSCREW	
30	96714860	2	CAPSCREW	
31	95201281	3	FITTING, GREASE	
33	96727136	12	NUT	
34	96700976	12	WASHER, FLAT	
35	96700828	4	WASHER	
36	96700836	12	WASHER	
37	95329975	5	ELBOW	
38	95676243	1	NIPPLE, PIPE	
39	95279196	2	ELBOW	
40	95209094	1	ELBOW	
41	51609048	2	PIN, GUIDE DUMP	
42	96702774	8	CAPSCREW	
43	51873776	1	GUARD, DRILL ROD (GUIDE)	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57714602 GUIDE EXTENSION ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
44	96712146	4	CAPSCREW	
45	95365078	1	ADAPTER	
46	96727102	1	CAPSCREW	
47	96704275	1	NUT	
48	52284122	1	PIN, GUIDE INDEX	
49	96714746	1	CAPSCREW	
50	96712096	1	LOCKWASHER	
51	96701990	1	NUT, HEX	
52	52282845	4	SPACER, GUIDE EXTENSION TUBE	

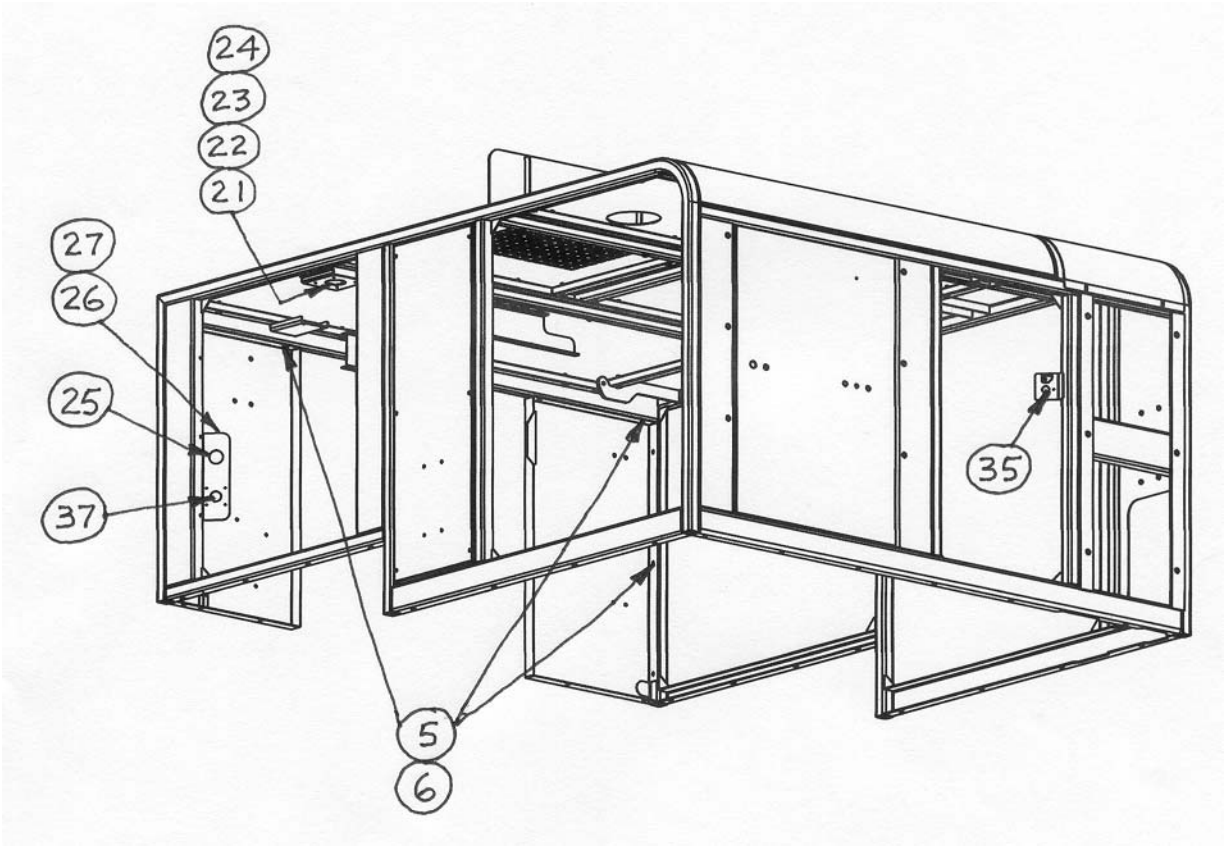
52327251 GREASE PUMP ASSEMBLY

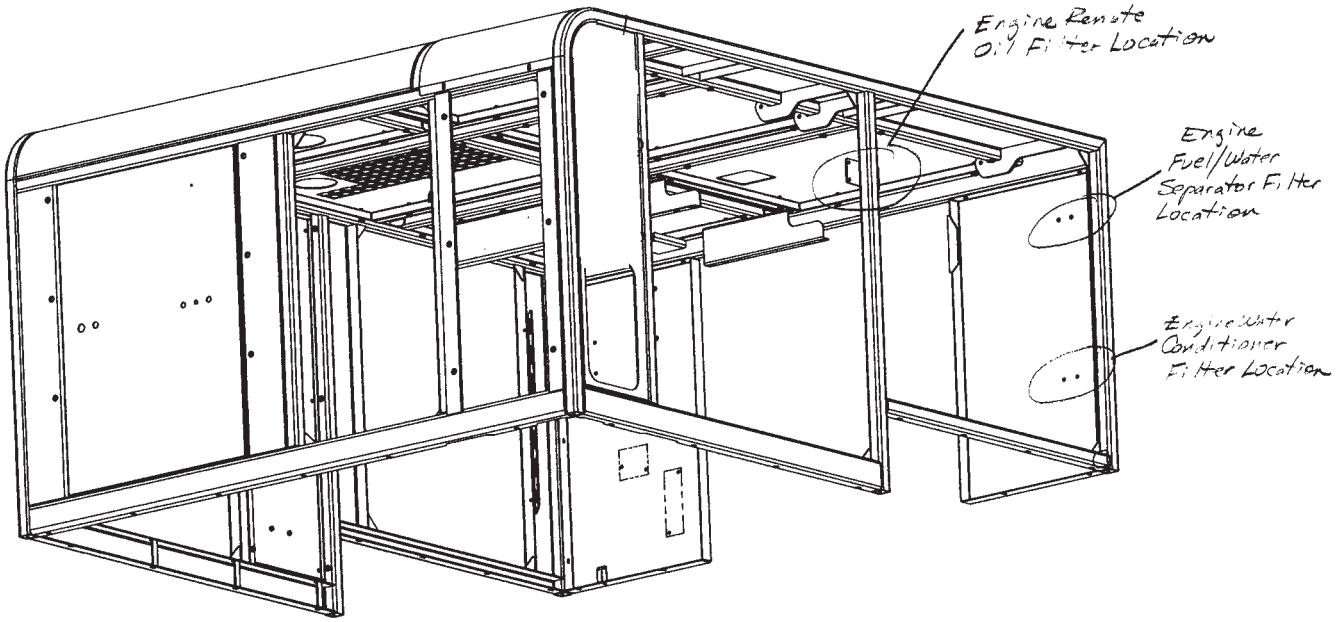


52327251 GREASE PUMP ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52127867	1	PUMP, GREASE	
2	51373322	1	LUBRICANT, THREAD (5 GAL)	
3	52327269	1	TRAY, GREASE BUCKET	
4	95279097	1	ADAPTER	
5	51027936	3	COUPLING, ACCESSORY AIR QUICK DISCONNECT	
6	51027902	2	COUPLING	
7	95279493	1	ADAPTER	
8	95335907	1	ADAPTER	
9	95279089	1	ADAPTER	
10	96726914	2	CAPSCREW	
11	96726807	2	NUT	
12	95315214	1	ADAPTER	
13	50947357	1	VALVE, BALL	
16	95377156	1	NIPPLE	
17	95447108	1	FITTING	

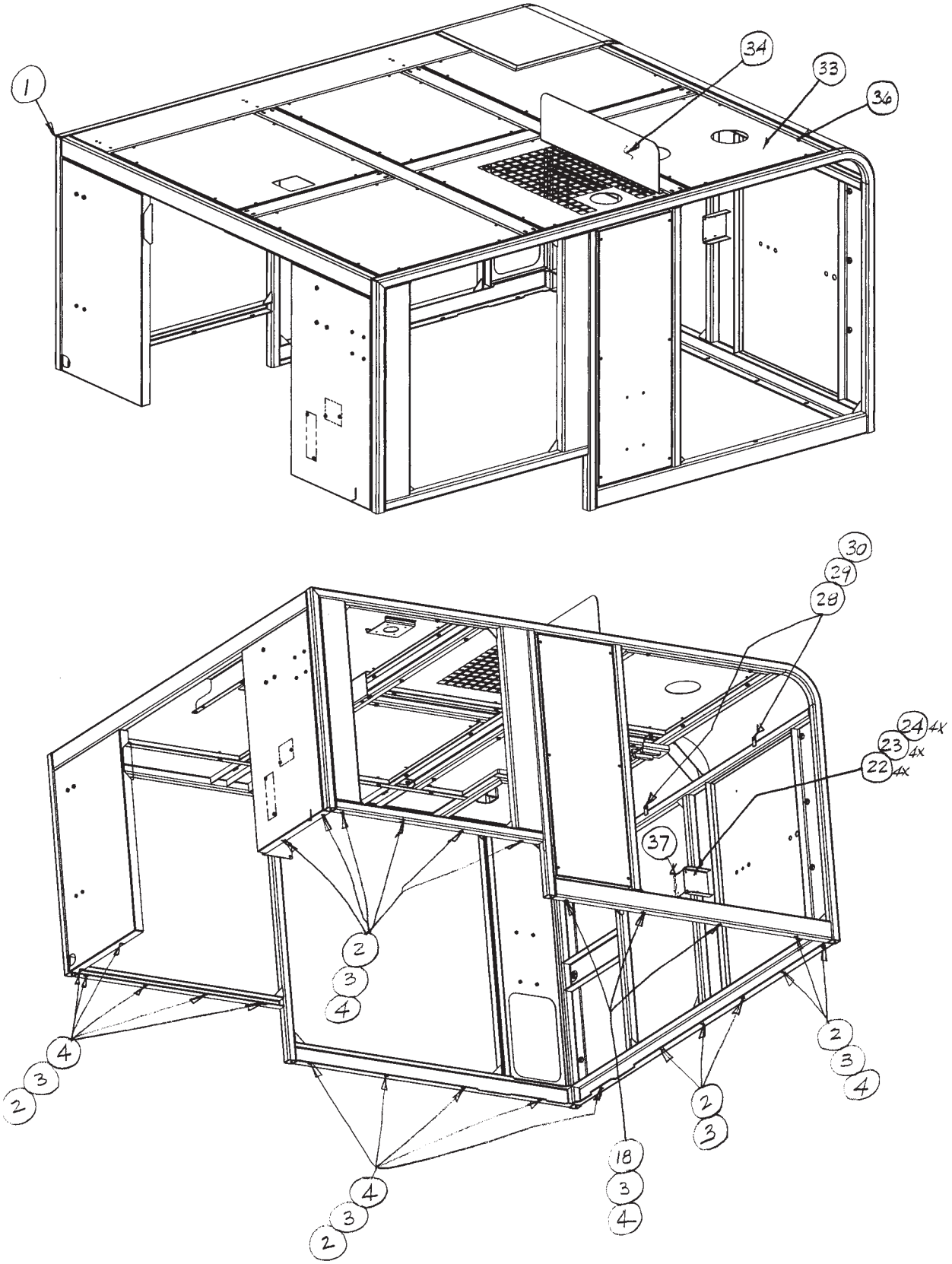
52329810 ENCLOSURE INSTALLATION





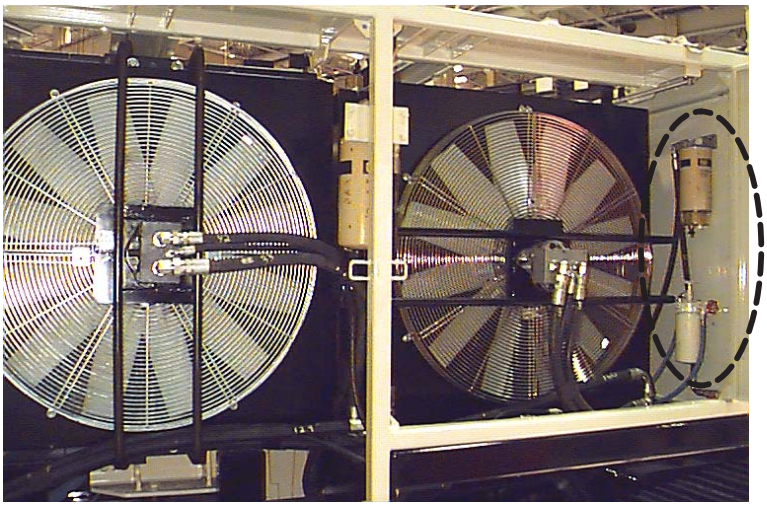
NOTE: REFERENCE NO. 39 NOT ILLUSTRATED.

52329810 ENCLOSURE INSTALLATION

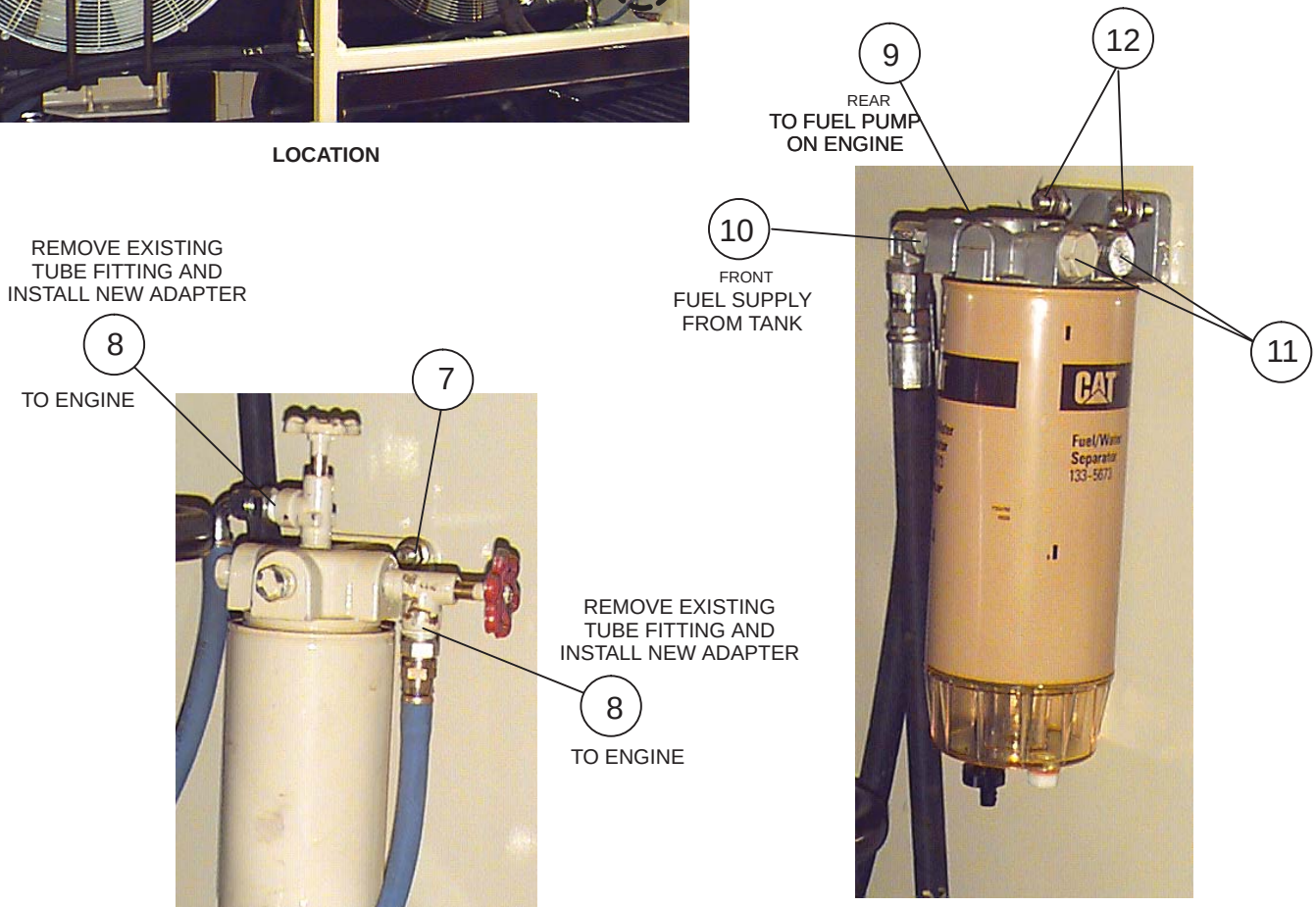


52329810 ENCLOSURE INSTALLATION

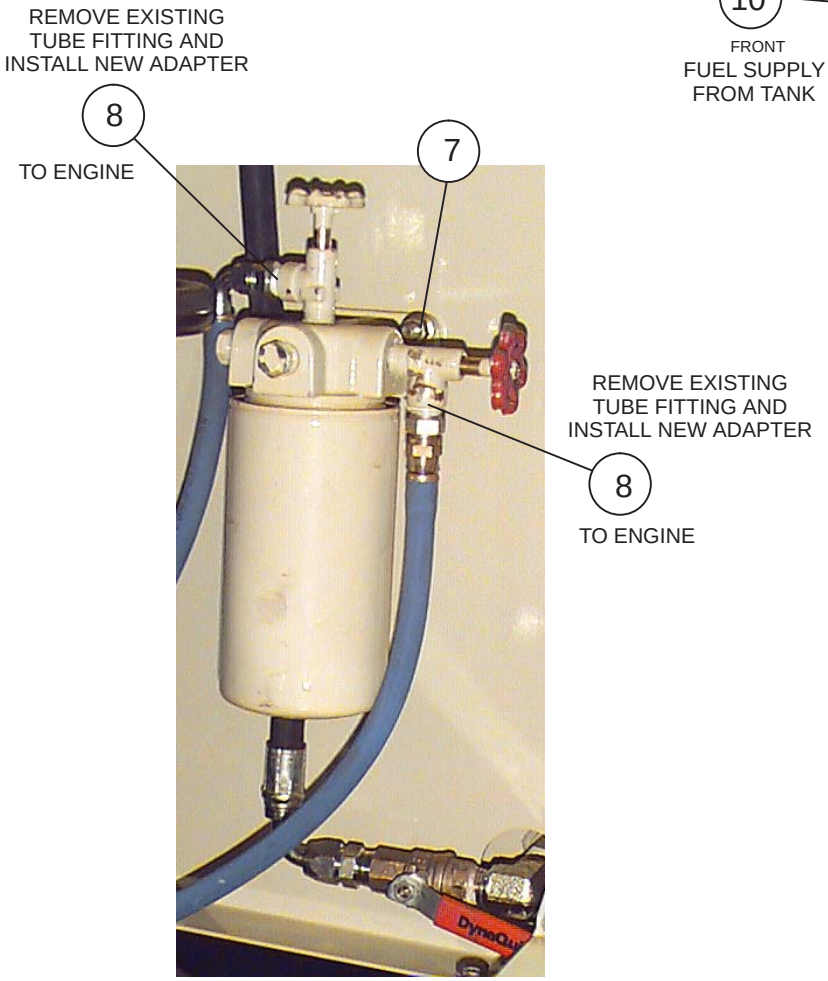
52329810 ENCLOSURE INSTALLATION



LOCATION

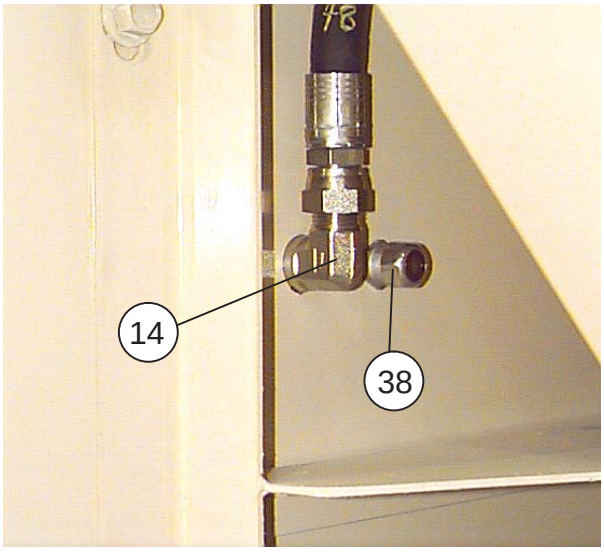


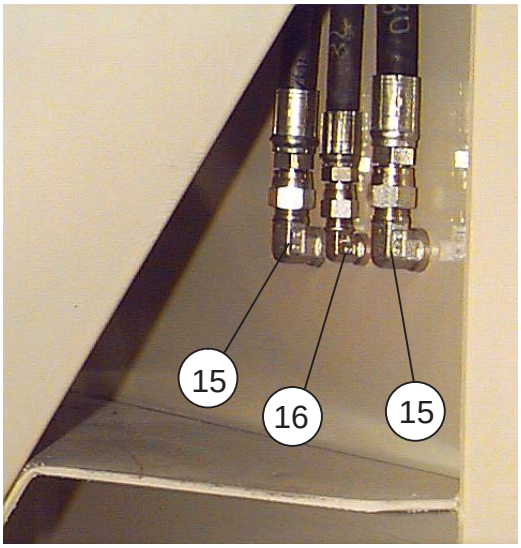
FUEL/WATER SEPARATOR FILTER (FURNISHED WITH CAT ENGINE)



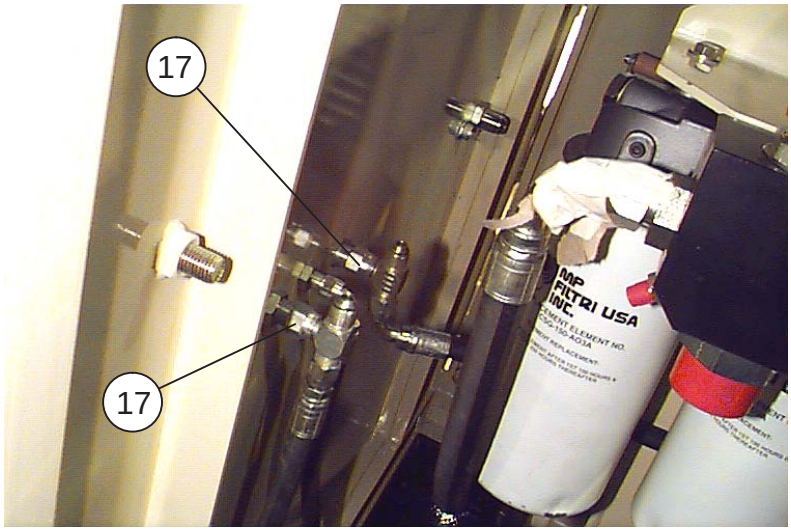
ENGINE WATER CONDITIONER FILTER (FURNISHED WITH CAT ENGINE)

52329810 ENCLOSURE INSTALLATION

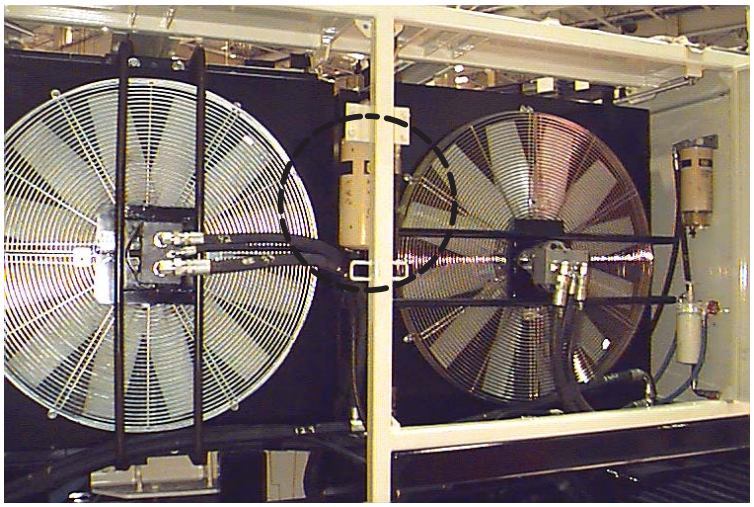




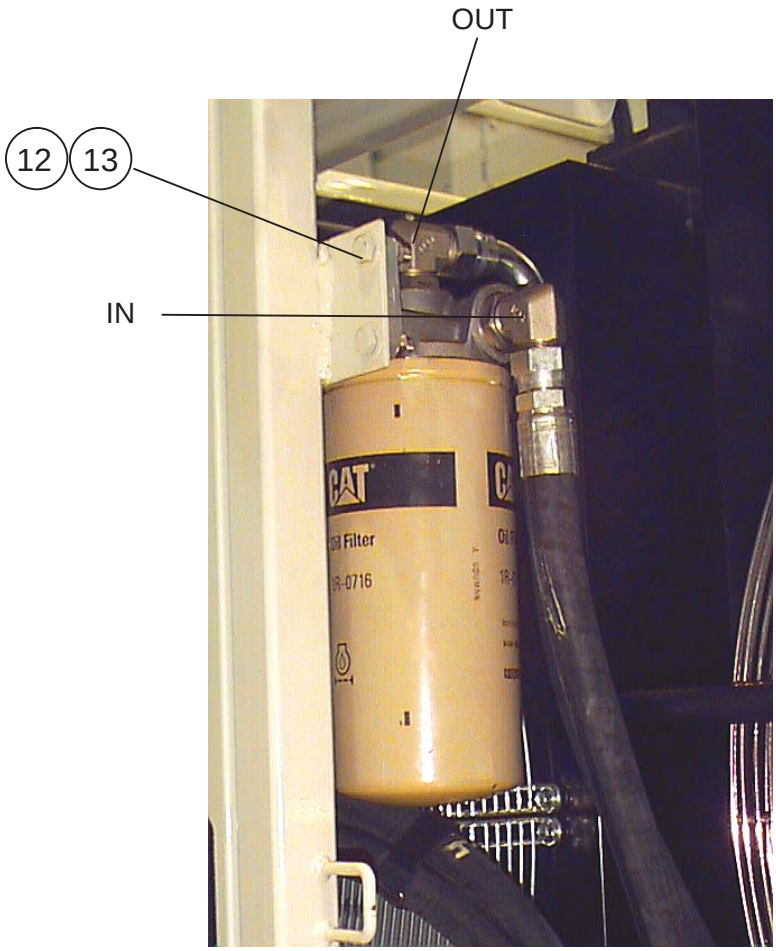
BACKWALL OF ENCLOSURE BEHIND DUST COLLECTOR



BACKWALL OF ENCLOSURE (VIEW FROM INSIDE ENCLOSURE)



LOCATION



REMOTE MOUNTED ENGINE OIL FILTER
(FURNISHED WITH CAT ENGINE)

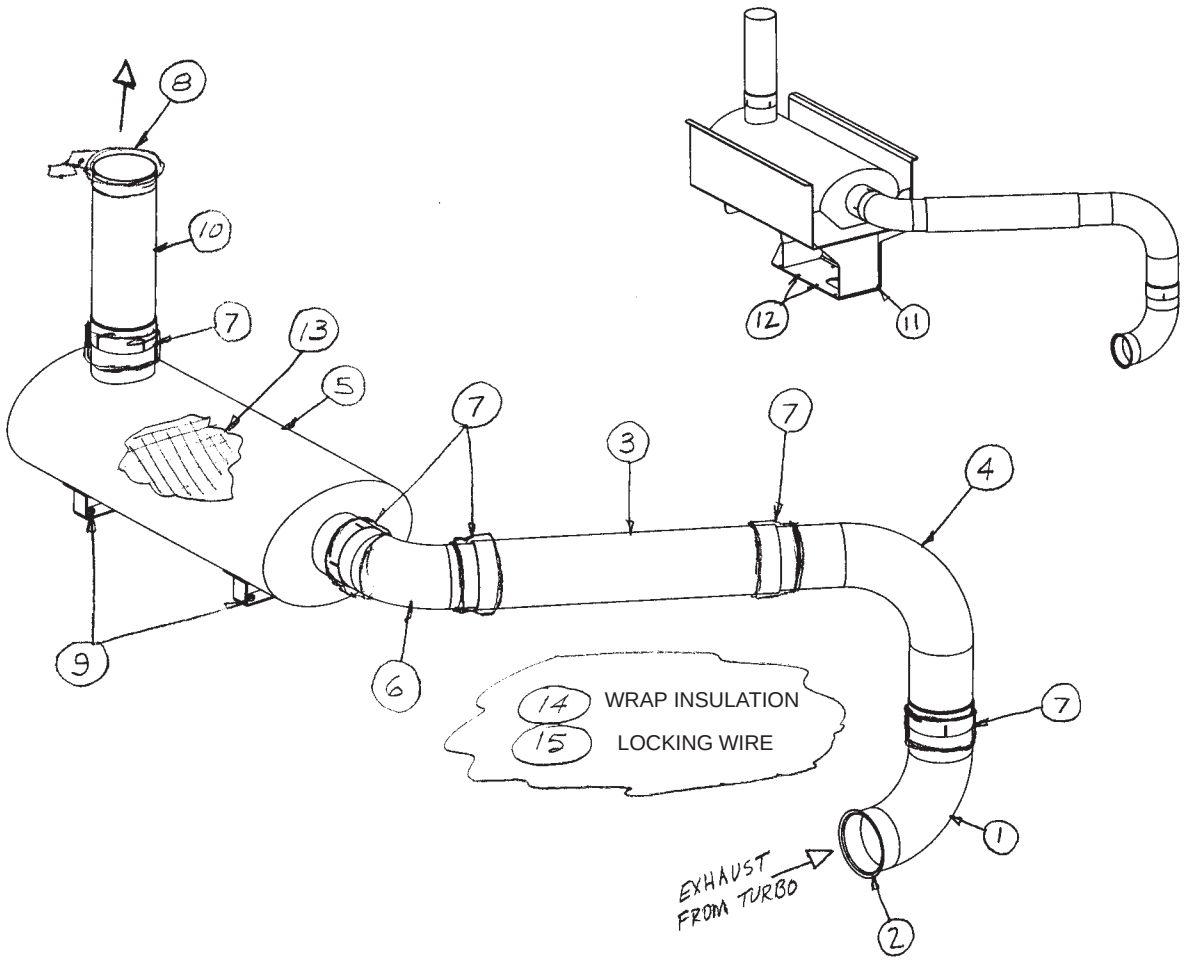
52329810 ENCLOSURE INSTALLATION

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52321569	1	ASSEMBLY, ENCLOSURE *REFER TO PAGE 6.5–1*	
2	96702774	23	SCREW. HEX. HD.	
3	96701982	50	WASHER, FLAT	
4	96727300	23	LOCKNUT, HEX. HD.	
5	96704564	12	SCREW. HEX. HD.	
6	96702501	12	WASHER, FLAT	
7	96727797	2	BOLT, FLANGED HD.	
8	95219713	2	ADAPTER	
9	95303368	1	ADAPTER	
10	95303335	1	ADAPTER	
11	95323465	2	PLUG	
12	96726914	6	BOLT	
13	96726807	4	LOCKNUT, FLANGED HD.	
14	52197167	1	ADAPTER	
15	95278966	2	ADAPTER	
16	95278958	1	ADAPTER	
17	95642484	2	ADAPTER	
18	96714795	3	BOLT, HEX. HD.	
21	52319142	1	ASSEMBLY, ENCLOSURE DOME LIGHT *REFER TO PAGE 6.10–1*	
22	96705728	8	CAPSCREW, HEX. HD.	
23	96715008	8	LOCKNUT, HEX. HD.	
24	96702493	8	WASHER, FLAT	
25	51607380	1	HOURMETER, DRIFTER	
26	52329711	1	PANEL, GAUGE	
27	96728480	10	BOLT, FLANGED HD.	
28	95396776	2	CLAMP, VINYL	
29	96727250	2	BOLT, FLANGED HD.	
30	96726815	2	LOCKNUT, FLANGED HD.	
32	51991172	2	EXTINGUISHER, FIRE	
33	52327541	1	PANEL, ROOF	
34	52324621	1	PANEL, DEFLECTOR	
35	52105392	1	SWITCH, BATTERY DISCONNECT	
36	96727607	8	BOLT, HEX. FLANGED HD.	
37	52323029	2	ASSEMBLY, E–STOP SWITCH ENCLOSURE	
38	50625946	1	GRIP, CORD	
39	52244605	20	TIE, ADHESIVE MOUNTED	
42	95302147	1	ELBOW	
43	95081709	3	WASHER, FLAT	

52329810 ENCLOSURE INSTALLATION

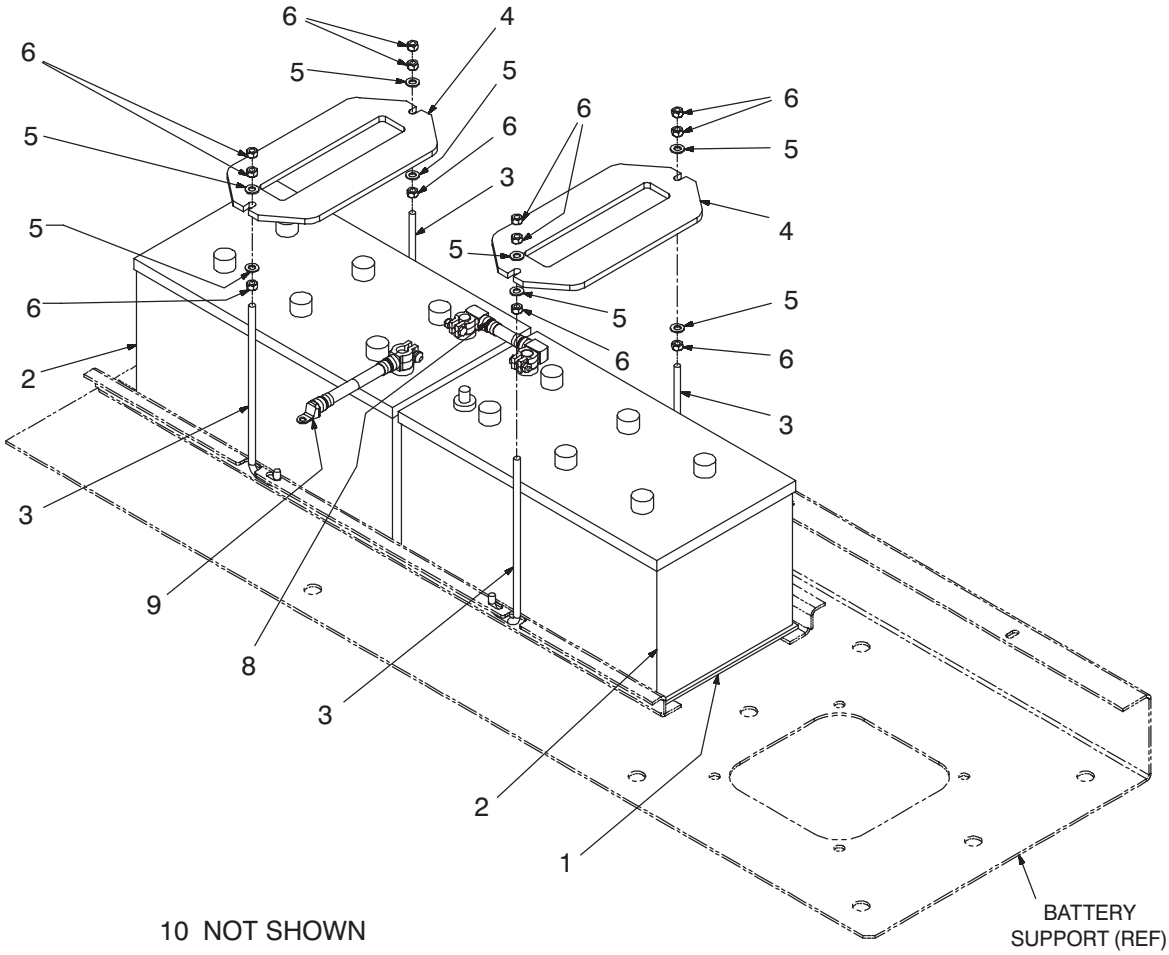
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
44	56947518	1	FITTING, HYD.	
45	81372831	1	REGULATOR, HEAVY DUTY DIA	
46	81664658	1	GAUGE	
47	95279535	1	ELBOW	
48	51903508	1	VALVE, RELIEF	
50	95200093	1	WASHER, FLAT	
51	95081667	1	WASHER, FLAT, WIDE	
52	51984128	3	FITTING, BULKHEAD TEST	

52315611 ENGINE EXHAUST ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52313913	1	ELBOW, EXHAUST	
2	52315629	1	CLAMP, EXHAUST	
3	52315652	1	TUBING, FLEX	
4	52315660	1	ELBOW, EXHAUST	
5	52313665	1	MUFFLER, EXHAUST	
6	52315678	1	ELBOW, EXHAUST	
7	51608123	5	CLAMP, EXHAUST	
8	51608149	1	CAP, RAIN	
9	96726914	4	BOLT, FLANGED HD.	
10	52315686	1	TUBE, EXHAUST	
11	52313921	1	BRACKET, MUFFLER MOUNTING	
12	96727169	8	BOLT, FLANGED HD.	
13	52319324	1	INSULATION, MUFFLER WRAP	
14	57578718	100	INSULATION, WRAP (FT)	
15	51038214	25	CLAMP, HOSE (FT)	

52315603 BATTERY INSTALLATION

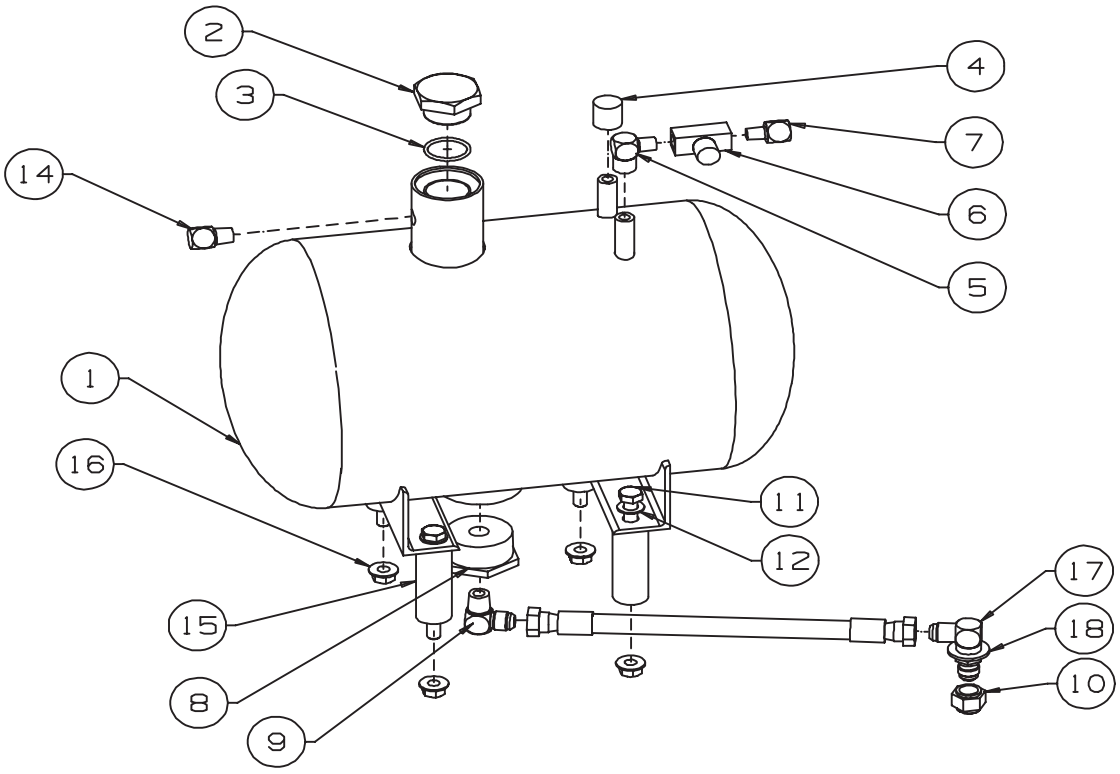


52315603 BATTERY INSTALLATION

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51869915	2	PAD, INSULATOR	
2	52286713	2	BATTERY	
3	52086238	4	BOLT, HOLD DOWN	
4	51728566	2	BRACKET, BATTERY HOLD DOWN	
5	96701982	8	WASHER, FLAT	
6	95922894	12	NUT, HEX. HD.	
8	51775823	1	CABLE, BATTERY (JUMPER)	
9	52324738	1	CABLE, BATTERY (NEG)	
10	51858132	1	WRAP, SPIRAL (12 FT)	

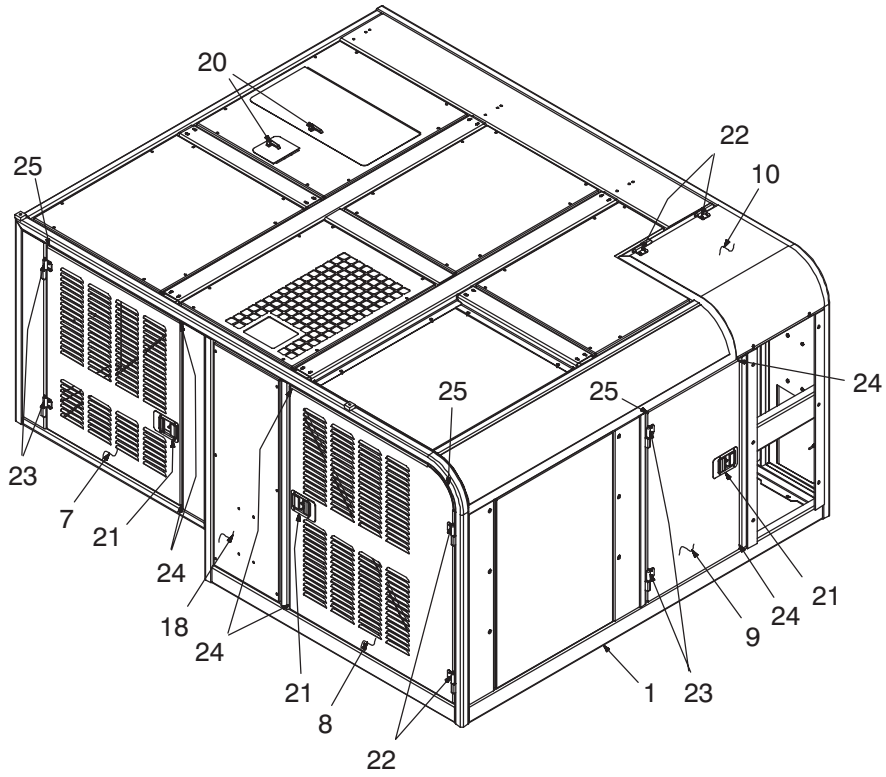
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

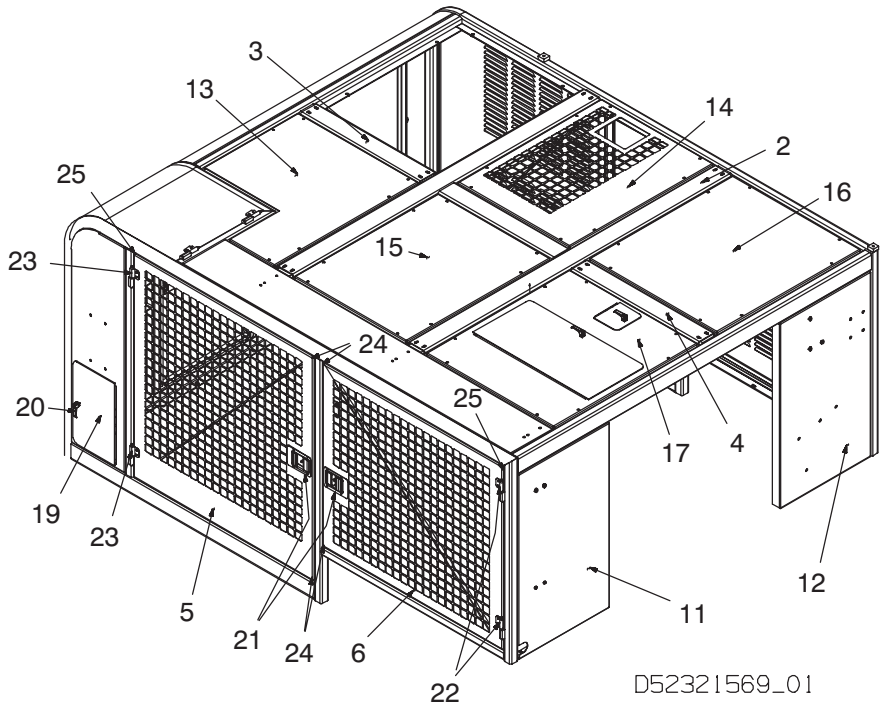
52327277 LUBRICATOR ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51910859	1	TANK, LUBE (6.4 GAL)	
2	35579630	1	PLUG	
3	35279942	1	O–RING	
4	95654372	1	CAP	
5	95424370	1	ELBOW	
6	51005627	1	VALVE, NEEDLE	
7	95209094	1	ELBOW	
8	95038261	1	BUSHING, REDUCING	
9	95279535	1	ELBOW	
10	95257325	1	CAP	
11	96745393	4	CAPSCREW	
12	96700844	4	WASHER	
14	95279493	1	ELBOW	
15	52326782	4	SPACER	
16	96727730	4	NUT	
17	95278966	1	FITTING	
18	96702568	2	WASHER	

52321569 ENCLOSURE ASSEMBLY



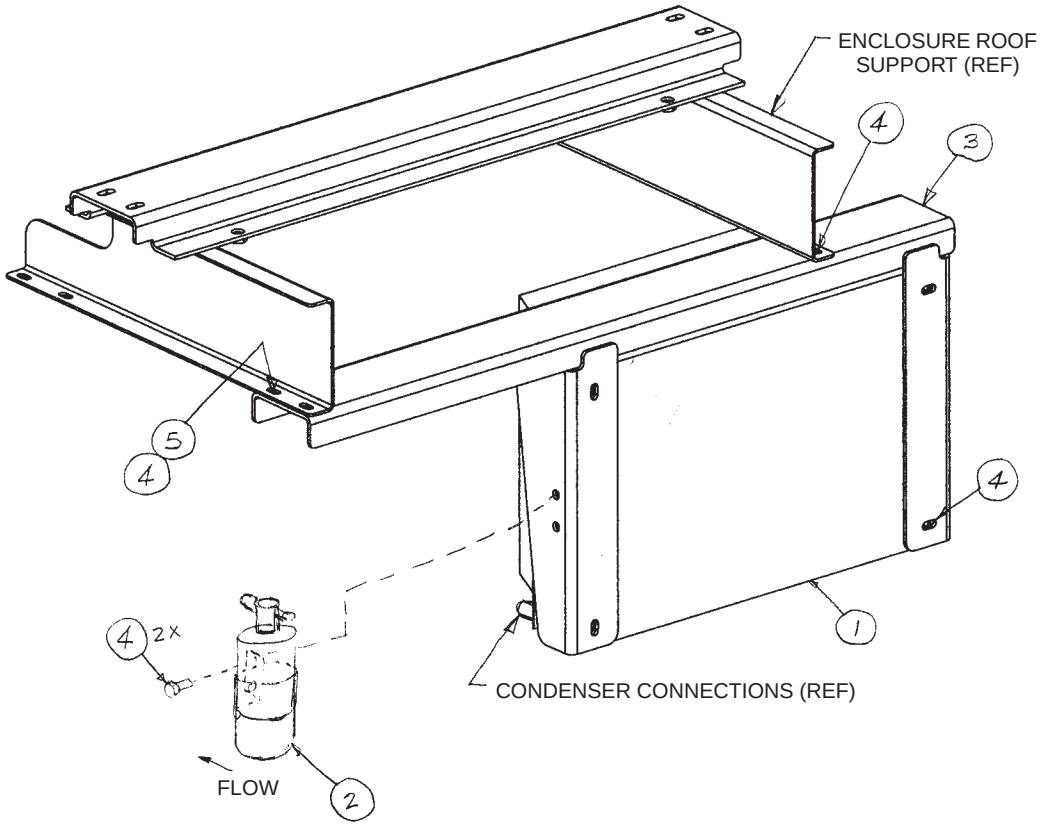


52321569 ENCLOSURE ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52315744	1	WELDMENT, FRAME	
2	52315819	1	WELDMENT, MAIN GRID	
3	52316395	1	MEMBER, GRID	
4	52315827	1	MEMBER, GRID	
5	52316361	1	DOOR, RIGHT REAR	
6	52316379	1	DOOR, RIGHT FRONT	
7	52316353	1	DOOR, LEFT FRONT	
8	52316346	1	DOOR, LEFT REAR	
9	52316387	1	DOOR, REAR	
10	52313954	1	DOOR, TOP ACCESS	
11	52315751	1	PANEL, RIGHT FRONT	
12	52315769	1	PANEL, LEFT FRONT	
13	52316130	1	PANEL, RIGHT REAR	
14	52316122	1	PANEL, LEFT MID TOP	
15	52316114	1	PANEL, MID TOP RIGHT	
16	52316106	1	PANEL, LEFT FRONT TOP	
17	52316098	1	PANEL, RIGHT FRONT TOP	
18	52316163	1	PANEL, SIDE BOLT-ON	
19	52316148	1	DOOR, SIDE ACCESS	
20	52316403	3	LATCH, LIFT & TURN	
21	52290764	5	LATCH, SLAM	
22	52307311	6	WELDMENT, HINGE (RH)	
23	52307303	6	WELDMENT, HINGE (LH)	
24	52307501	10	BUMPER, DOOR	
25	52315835	5	SPRING, DOOR	

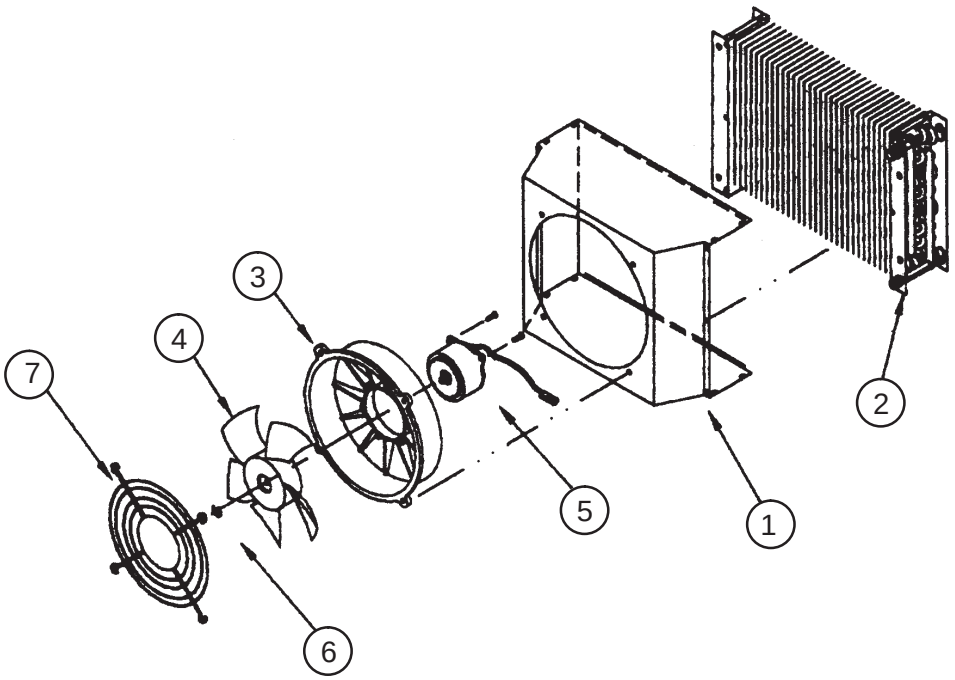
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52321379 A/C CONDENSER INSTALLATION



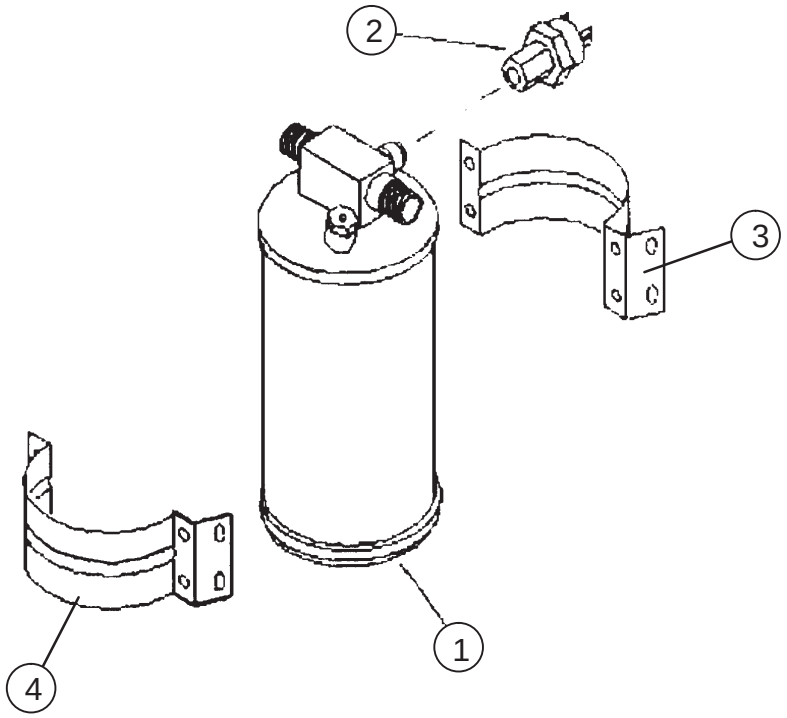
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52322245	1	CONDENSER, A/C *REFER TO PAGE 6.7–1*	
2	52322252	1	ASSEMBLY, A/C RECEIVER DRIER *REFER TO PAGE 6.8–1*	
3	52321353	1	BRACKET, MOUNTING	
4	96727193	10	BOLT, FLANGED HD.	
5	96726799	2	LOCKNUT, FLANGED HD.	

52322245 A/C CONDENSER



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52322179	1	CASING, CONDENSER	
2	52322187	1	COIL, CONDENSER	
3	52322195	1	VENTURI, CONDENSER	
4	52322203	1	FAN, CONDENSER	
5	52322211	1	MOTOR, CONDENSER (24V)	
6	52322229	1	C–CLIP, CONDENSER MOTOR SHAFT	
7	52322237	1	GUARD, CONDENSER FAN FINGER	
8	51716066	1	RELAY, 24 VDC	

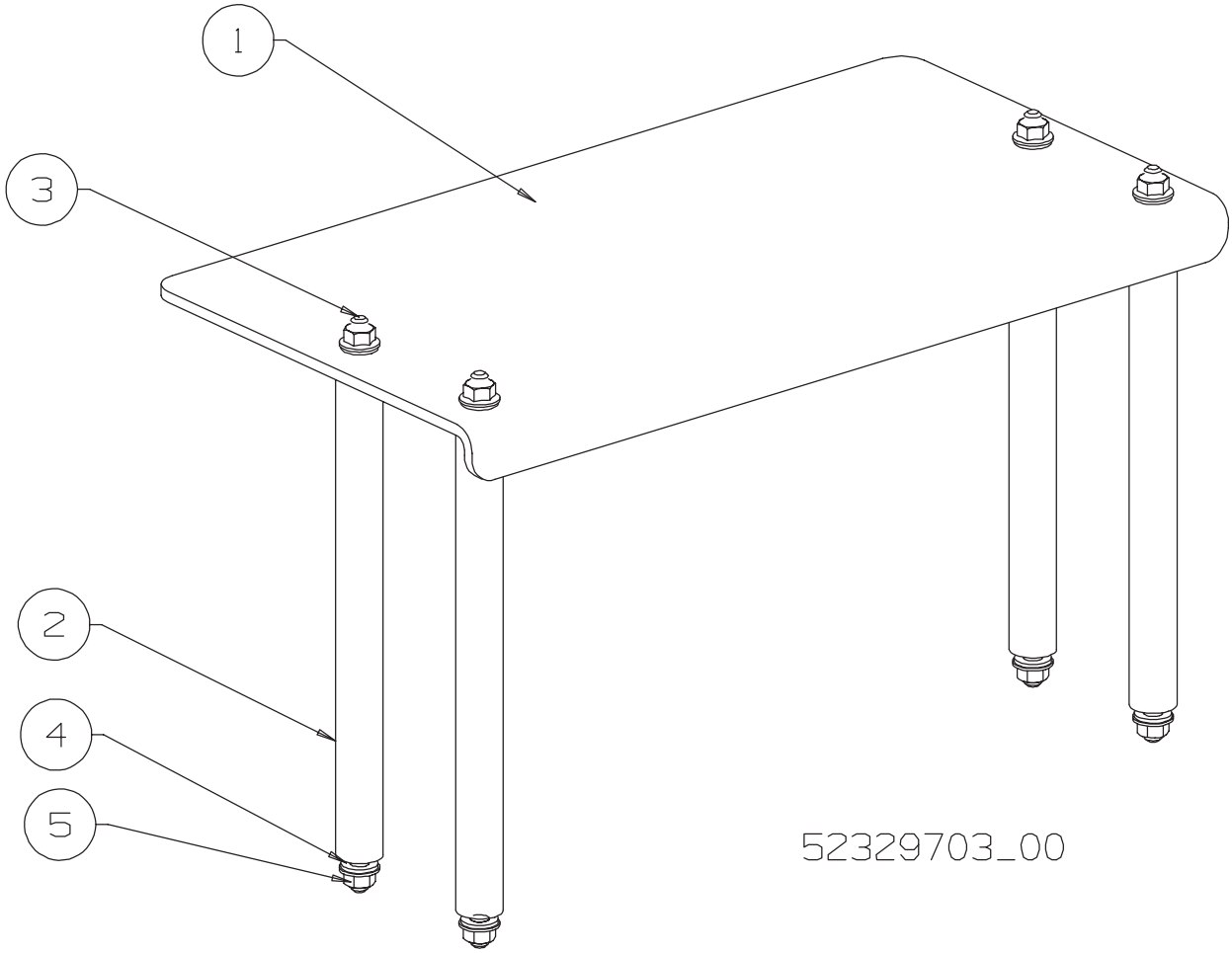
52322252 A/C RECEIVER DRIER ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52322260	1	DRIER, RECEIVER	
2	52322278	1	SWITCH, PRESSURE	
3	NSS	1	BRACKET, MOUNTING	
4	NSS	1	BRACKET, MOUNTING	

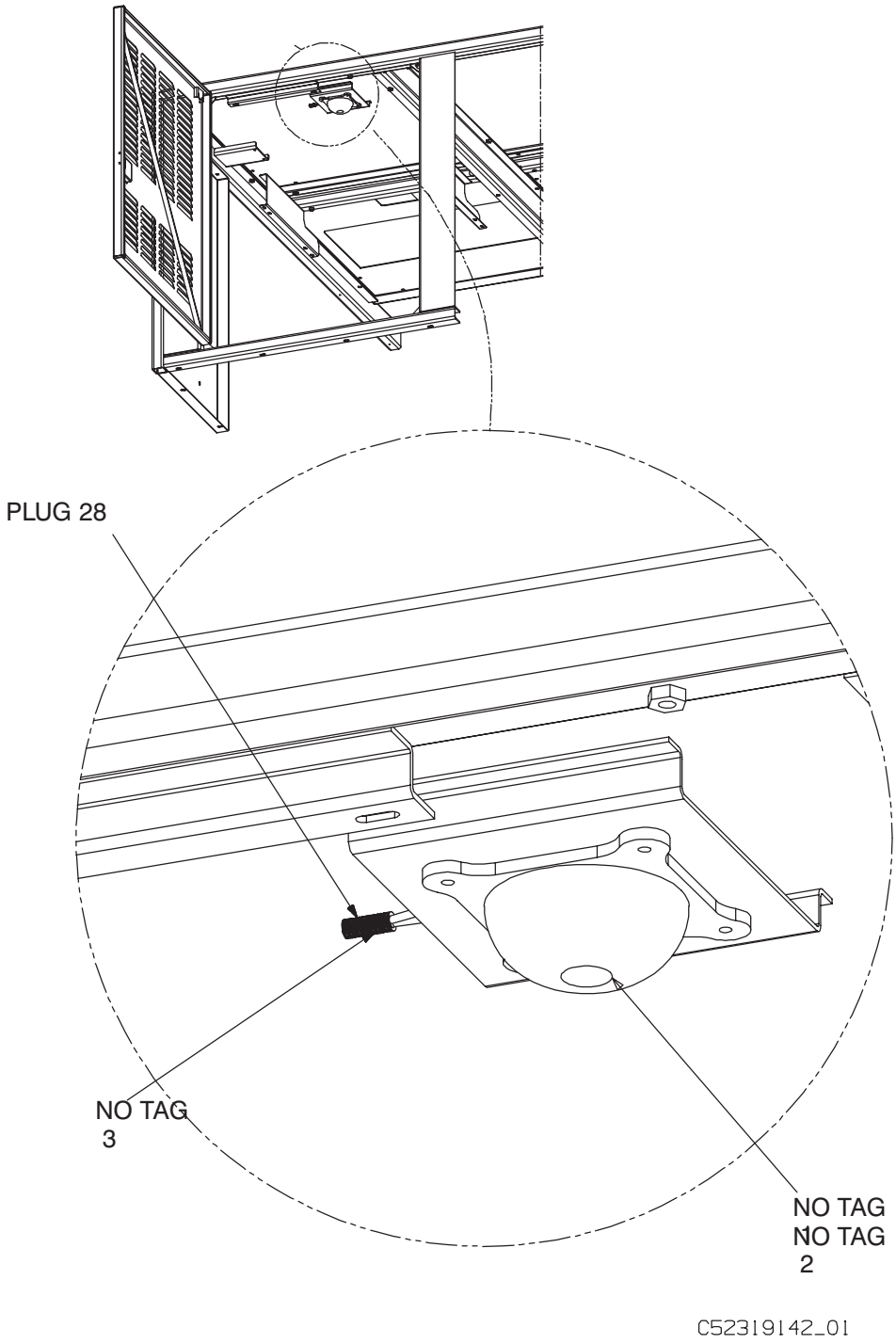
NSS NOTICE: THESE PARTS ARE NOT SOLD SEPARATELY.

52329703 AUXILIARY CONTROL VALVE COVER ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52329687	1	COVER, VALVE ASSEMBLY	
2	52329695	4	SPACER, VALVE COVER	
3	52329737	4	ROD, THREADED	
4	03167905	8	WASHER, PLAIN	
5	95077269	8	NUT, HEX. HD.	

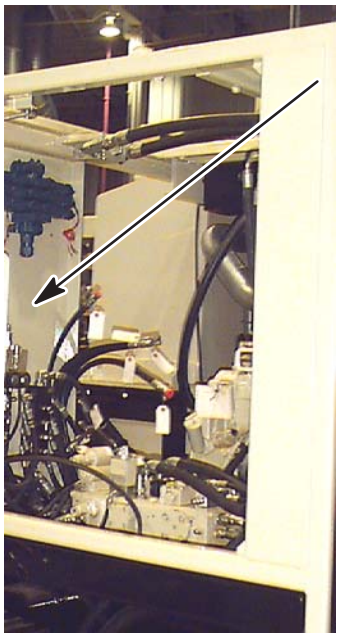
52319142 ENCLOSURE DOME LIGHT ASSEMBLY



52319142 ENCLOSURE DOME LIGHT ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52322161	1	LENS, DOME LIGHT	
2	52322146	1	BULB, LIGHT	
3	52322153	1	CONNECTOR, ELECTRICAL	

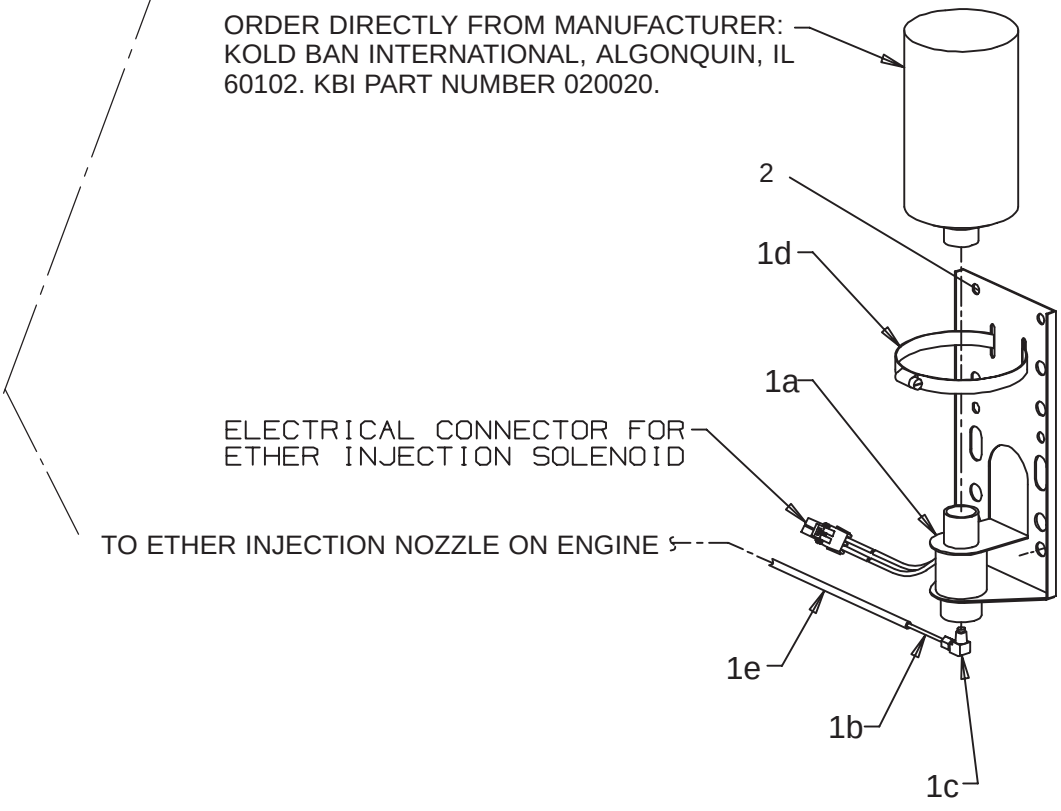
52325156 ETHER INJECTION ASSEMBLY



ETHER CANISTER BRACKET LOCATED BEHIND GAUGES

LOCATION

ORDER DIRECTLY FROM MANUFACTURER:
KOLD BAN INTERNATIONAL, ALGONQUIN, IL
60102. KBI PART NUMBER 020020.

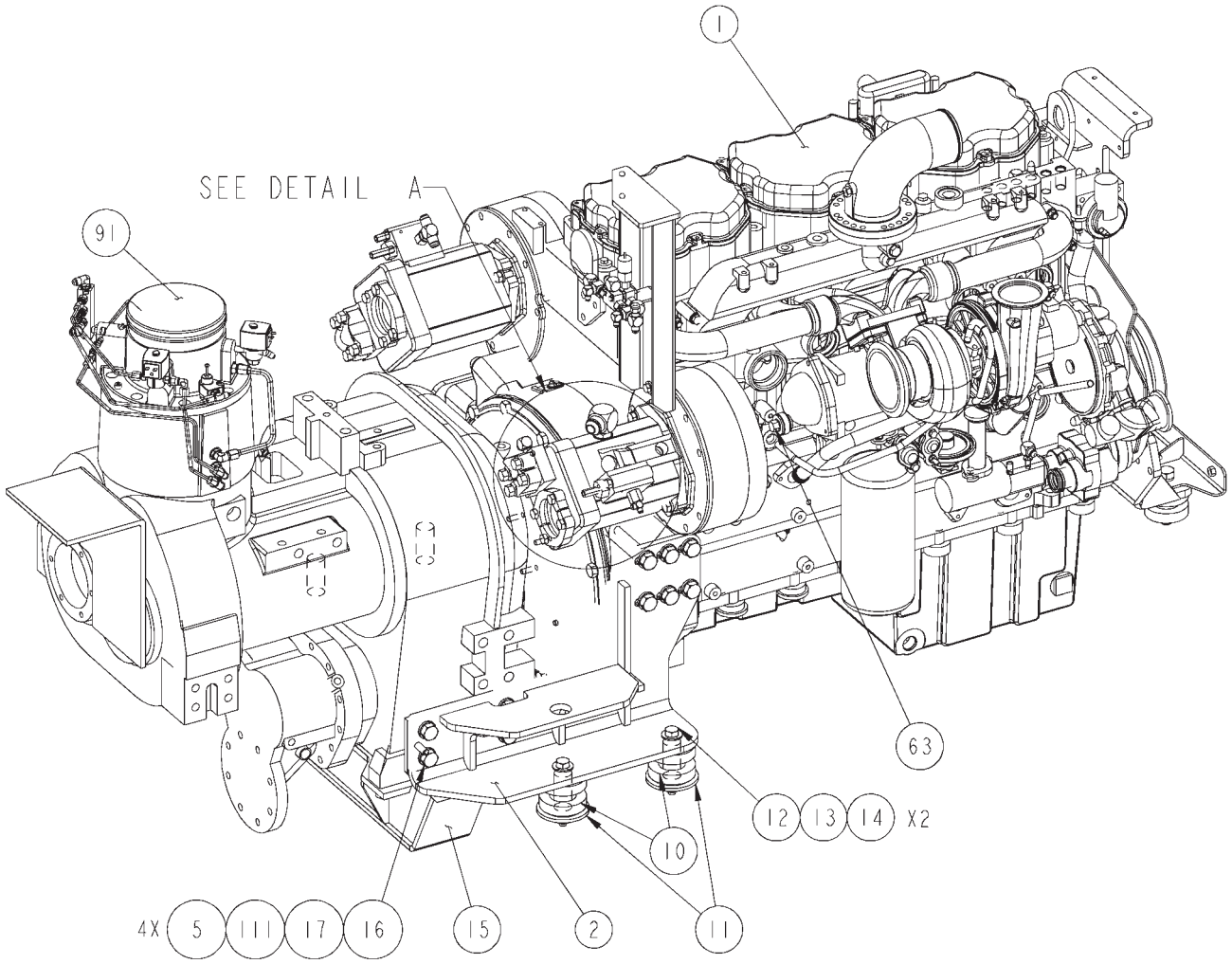


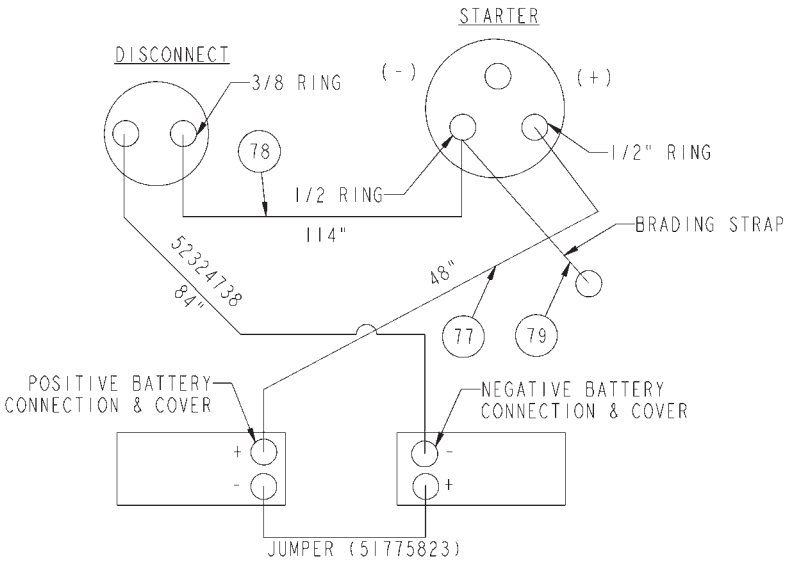
52325156 ETHER INJECTION ASSEMBLY

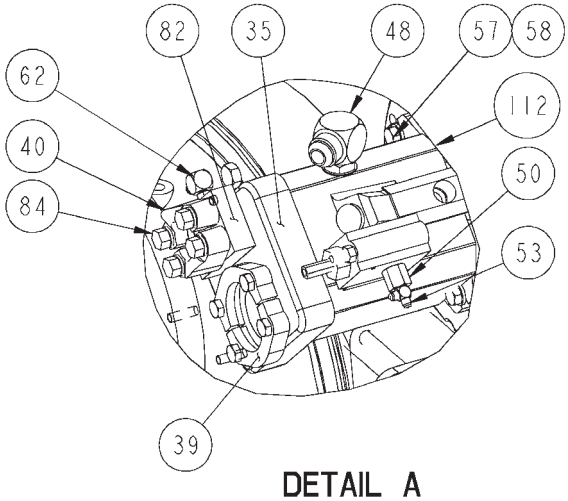
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52099827		ETHER INJECTION KIT	
1a	51789790	1	.VALVE	
1b	51789808	1	.TUBING	
1c	51308666	1	.BLOCKOR	
1d	51308682	1	.CLAMP	
1e	51792968	1	.LOOM	
1f	57358830	1	.CONDUIT, 8 IN.	
2	96728480	4	BOLT, FLANGED HD.	
3	51919488	1	LOOM, 10 IN.	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57709180 POWER PACK INSTALLATION

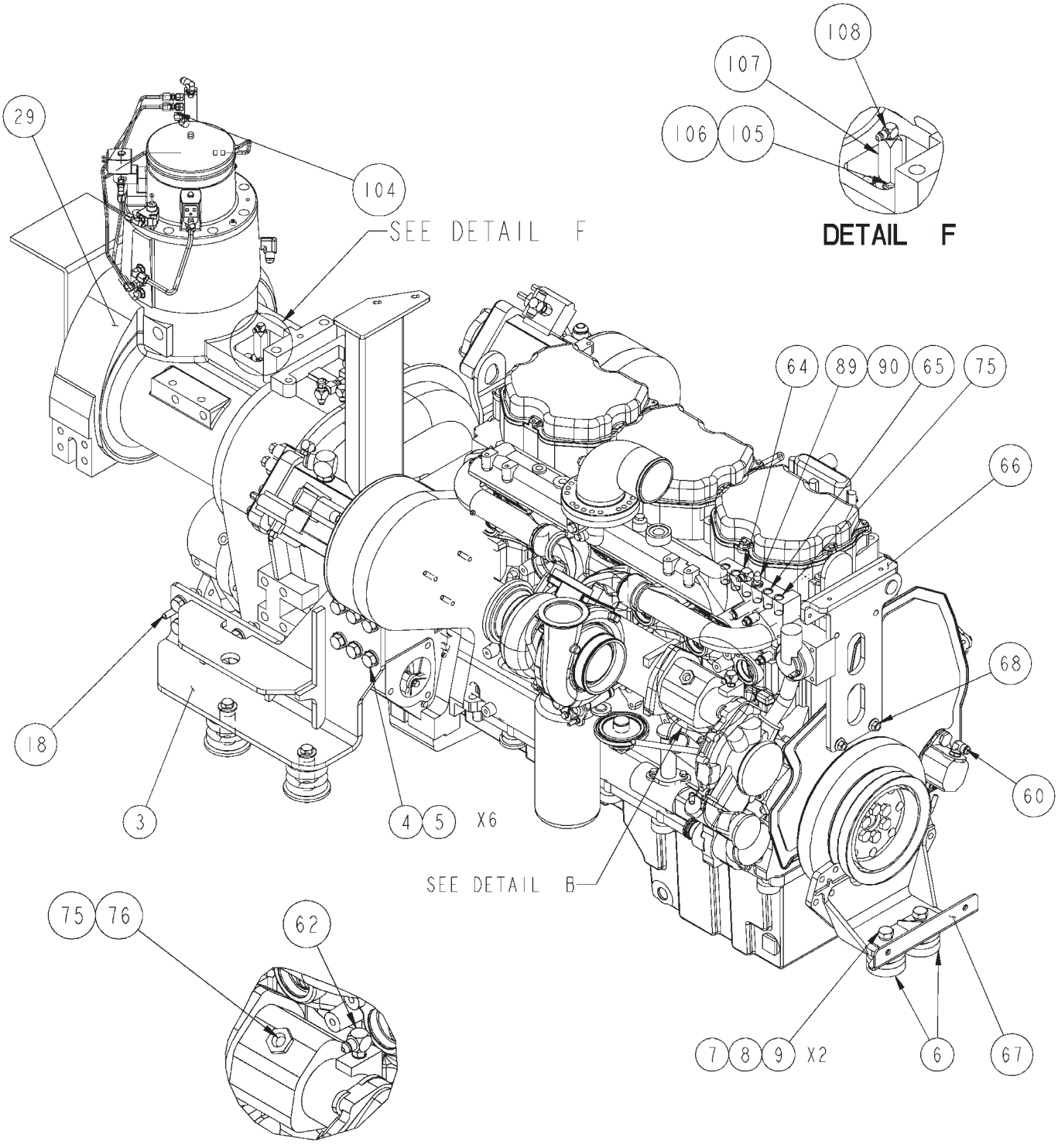






DETAIL A

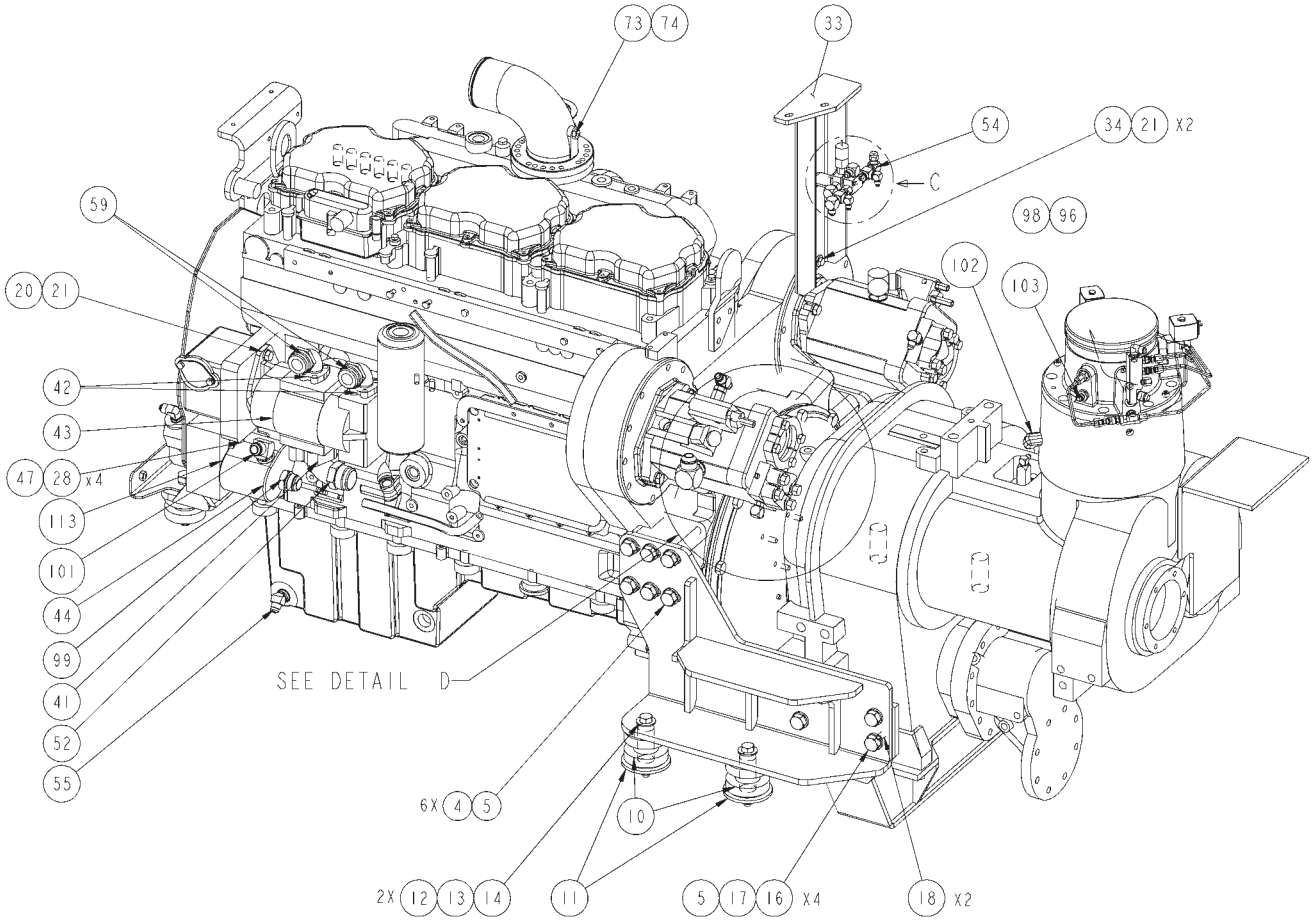
57709180 POWER PACK INSTALLATION

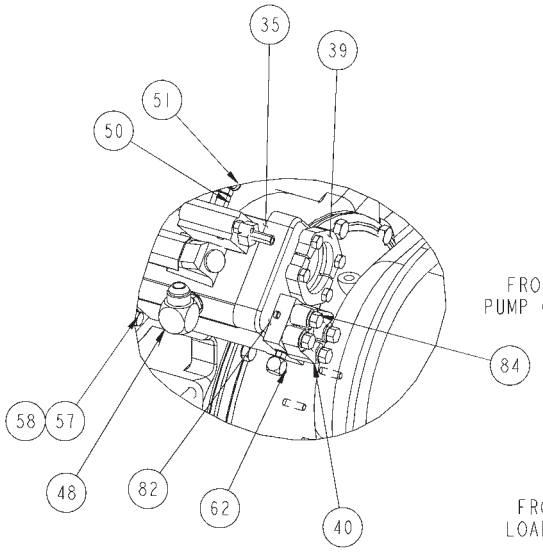


WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

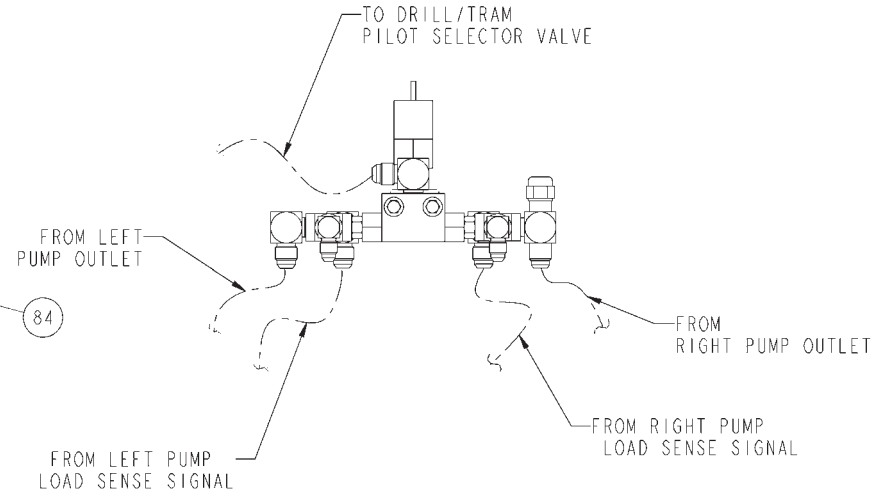
57709180 POWER PACK INSTALLATION

1. #63 IS ON THE LOWER SIDE OF THE COOLER GP--ENGINE OIL(CLOSE TO RH PUMP.)
2. #61 IS ON FUEL INJECTOR VALVE.
3. ITEM #46 IS ON REMOTE FILTER ADAPTER.



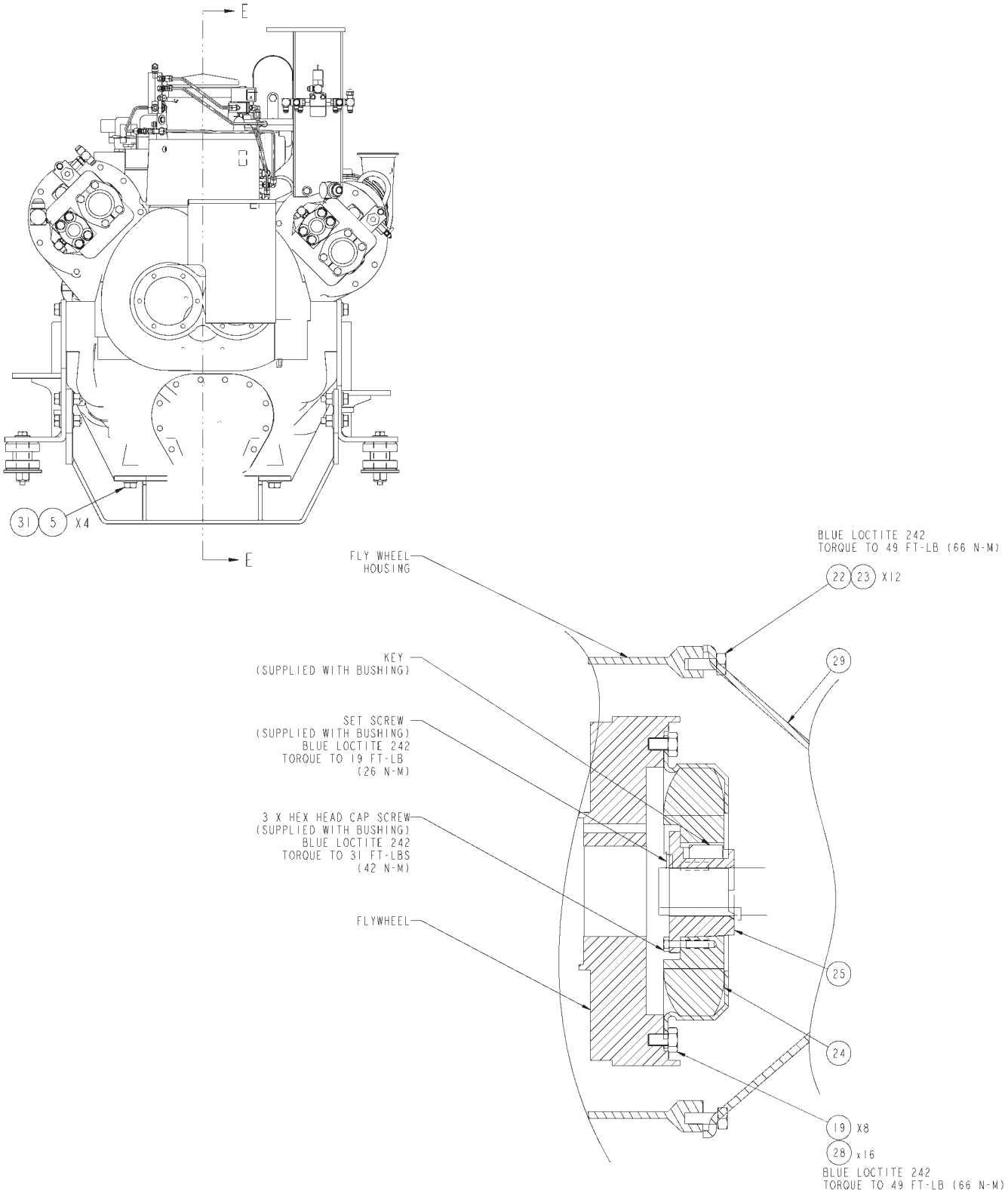


DETAIL D



VIEW- C

57709180 POWER PACK INSTALLATION



SECTION E-E

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57709180 POWER PACK INSTALLATION

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52313731	1	ENGINE, DIESEL	
	52183233	1	.FILTER, LUBE OIL	
	52322443	1	.SEPARATOR, PRIMARY FUEL FILTER/WATER	
	52322450	1	..BOWL, WATER SEPARATOR	
	52322468	1	.FILTER, SECONDARY FUEL	
	57511446	1	.ELEMENT, COOLANT CONDITIONER PRE-CHARGE	
	56264245	1	.ELEMENT, COOLANT CONDITIONER MAINTENANCE	
	52322419	1	.ASSEMBLY, DIP STICK	
	52322427	1	.ASSEMBLY, DIP STICK TUBE	
	52322534	1	.V–BELT, ALTERNATOR	
	52326568	1	.EMS MAIN UNIT, ENGINE	
	52326576	1	.GAUGE UNIT, EMS QUAD	
2	52325040	1	BRACKET, ENGINE SUPPORT (L)	
3	52325032	1	BRACKET, ENGINE SUPPORT (R)	
4	95920021	12	BOLT, HEX. HD.	
5	51377349	48	WASHER, DISC-LOK	
6	52324928	2	ISOLATOR, ENGINE FRONT	
7	95920104	2	BOLT, HEX. HD.	
8	95943916	2	LOCKNUT, HEX HD.	
9	50959030	8	WASHER, FLAT	
10	52324936	4	MOUNT, CENTER BONDED	
11	52086188	4	WASHER, ISOLATOR	
12	95983318	4	BOLT, HEX. HD.	
13	95955886	4	LOCKNUT	
14	96704150	4	WASHER, FLAT	
15	52324860	1	BRACKET, COMPRESSOR SUPPORT	
16	95920047	8	BOLT	
17	95077822	8	HEX NUT	
18	95078283	4	PIN, ROLL	
19	95818837	8	CAPSCREW	
20	95919569	2	CAPSCREW, HEX. HD.	
21	51377372	6	WASHER, DISC-LOK	
22	95388575	12	SCREW,CAP	
23	95264545	12	WASHER,FLAT	
24	35834795	1	COUPLING, DRIVE AIREND	
25	52106796	1	BUSHING	
27	95064689	8	WASHER, PLAIN, FLAT.	
28	51377398	44	WASHER, DISC-LOK	

57709180 POWER PACK INSTALLATION

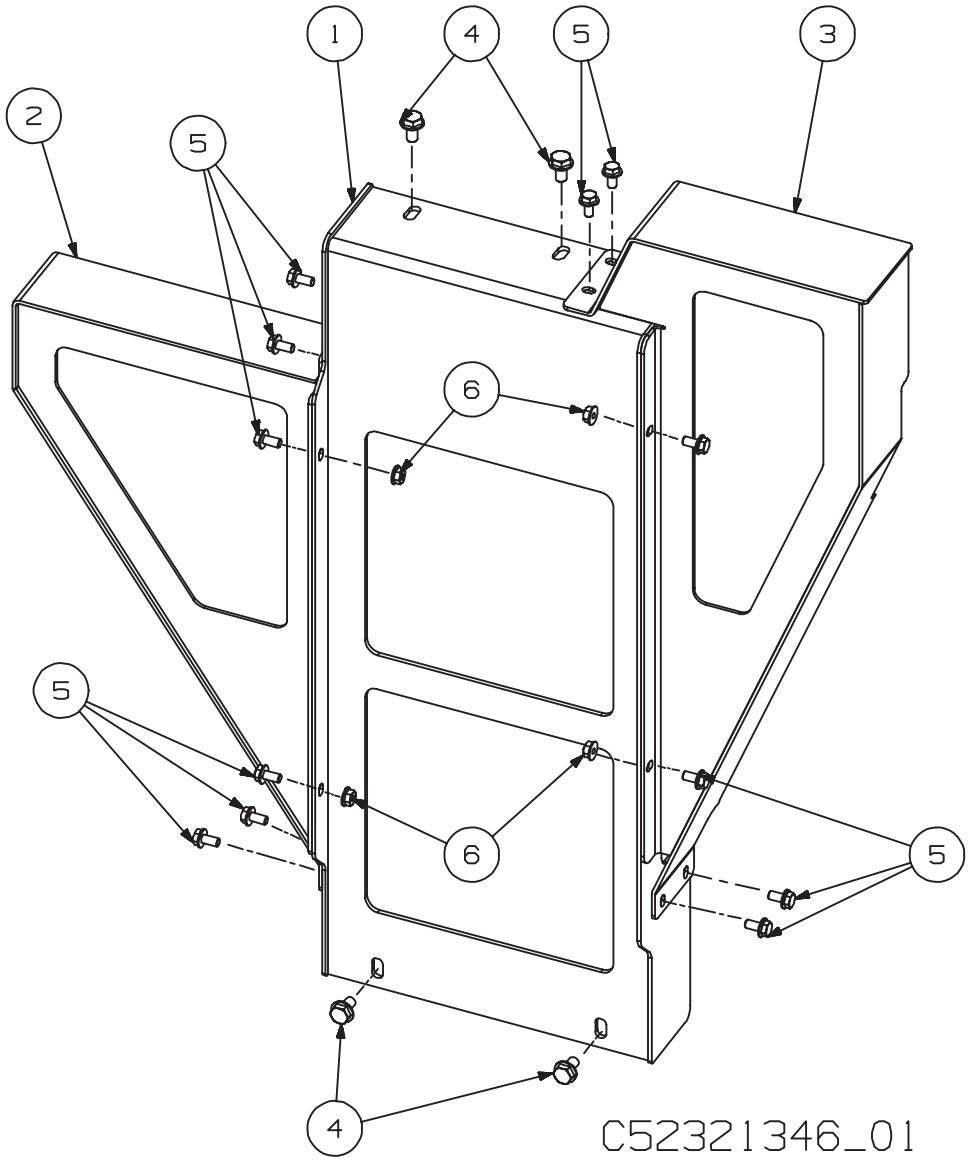
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
29	35086347	1	ASSEMBLY, AIR END	
	36746410	1	.GEAR SET	
	35366657	1	.PUMP, OIL	
	36783710	1	.COUPLING ASSY	
	35092279	1	.STRAINER ASSY	
	36502870	1	.DECAL, FILTER MAINT.	
	36860336	2	.ELEMENT,OIL FILTER	
30	95919254	12	CAPSCREW, HEX. HD.	
31	96704440	4	CAPSCREW, HEX. HD.	
33	52316684	1	BRACKET, COMPRESSOR INTAKE TUBE SUPPORT	
35	52314382	2	ASSEMBLY, FEED/ROTATION HYDRAULIC PUMP	
	52320884	1	.PUMP	
	52320892	1	..GROUP,ROTARY	
	52315058	1	.VALVE,PILOT	
	51352862	3	..O–RING	
	51352839	4	..SCREW, SOCKET	
	51352870	1	..PLUG	
39	51366615	2	KIT, FLANGE	
40	51366649	2	KIT, FLANGE	
41	51914299	1	KIT, FLANGE	
42	52086329	2	KIT, FLANGE	
43	52311479	1	PUMP, HYDRAULIC TANDEM (FAN)	
	52314853	1	.KIT, SEAL	
44	57693814	1	PUMP, HYDRAULIC GEAR (DUST COLLECTOR)	
46	95329983	1	CONNECTOR	
47	96714738	2	CAPSCREW, HEX. HD.	
48	95368890	2	ADAPTER	
50	35287945	2	ADAPTER, EXPANDER	
51	95188710	1	ADAPTER, TEE	
52	57347411	1	ADAPTER	
53	95003166	1	ADAPTER, TEE	
54	52316825	1	ASSEMBLY, LOAD SENSE SHUTTLE VALVE	
			REFER TO PAGE 9.28–1	
55	95280152	1	ADAPTER	
57	95919817	4	CAPSCREW	
58	51377356	8	WASHER	
59	52311081	2	ADAPTER	
60	95303335	1	ADAPTER	
61	95372173	1	ADAPTER	
62	95653614	3	ADAPTER	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57709180 POWER PACK INSTALLATION

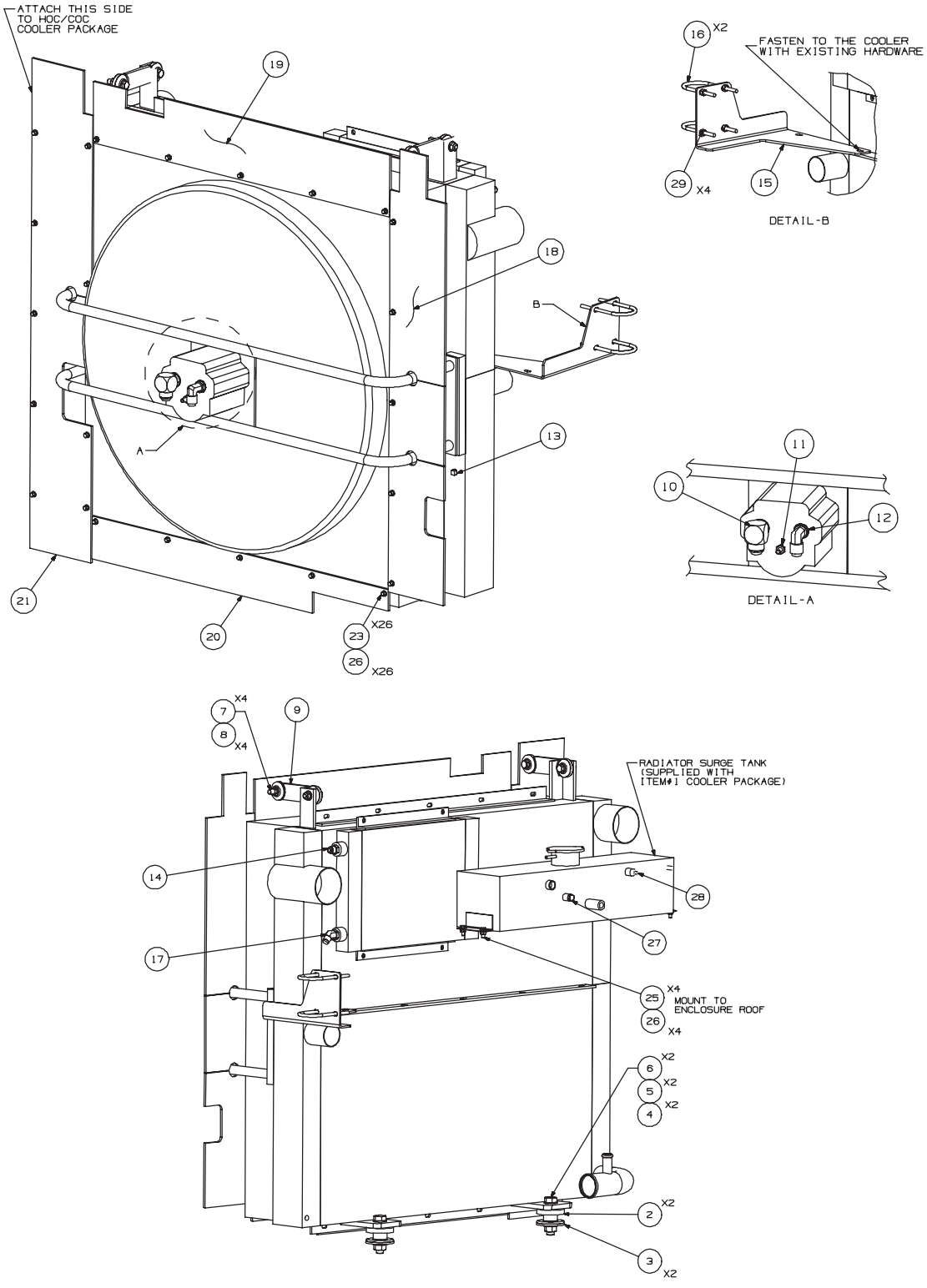
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
63	95219713	1	ADAPTER	
64	95209094	1	ADAPTER	
65	51713451	1	ADAPTER	
66	52319407	1	BRACKET, RADIATOR TUBE MOUNTING	
67	52319415	1	BRACKET, MOUNTING	
68	96726815	2	LOCKNUT, FLANGED HD.	
71	52324779	1	CLAMP, HOSE	
73	52324688	1	PLUG	
74	51792976	1	NOZZLE, ETHER INJECTION	
75	51713436	2	CONNECTOR, HOSE	
76	95037438	1	BUSHING, PIPE	
77	52324712	1	CABLE, BATTERY (+)	
78	52324720	1	CABLE, BATTERY (–)	
79	52117603	1	CABLE, BATTERY (GRD STRAP)	
80	52324746	1	CABLE, GROUND	
82	52325461	1	SPACER, GAUGE PORT ADAPTER	
84	96711924	4	CAPSCREW	
88	95654208	2	CLAMP, VINYL HOSE	
89	95037347	1	BUSHING, PIPE	
90	52301041	1	SENSOR, FAN TEMPERATURE	
91	39922877	1	UNLOADER, AIR END	
			REFER TO PAGE 8.1–1	
93	52326741	1	BRACKET, HOSE CLAMP	
94	52329679	1	BRACKET, HOSE	
95	96700901	4	CAPSCREW	
96	96701875	2	CAPSCREW	
97	57714321	1	BRACKET, HOSE CLAMP	
98	51726255	1	CLAMP, HOSE	
99	95371217	1	CONNECTOR, STRT THRD	
101	95359410	1	ELBOW	
102	95279535	1	FITTING	
103	95219721	1	FITTING	
104	51298198	1	ORIFICE	
105	95316972	1	CONNECTOR	
106	95266425	1	O–RING	
107	57552275	1	CHECK VALVE	
108	95293403	1	ELBOW	
252	56961774	0	HOSE ASSY	
253	56956014	0	HOSE ASSY	

52321346 BELTGUARD ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52319423	1	BELTGUARD, ENGINE	
2	52319431	1	BELTGUARD, ALTERNATER	
3	52319506	1	BELTGUARD, A/C COMPRESSOR	
4	96727169	4	BOLT, FLANGED HD.	
5	96728480	12	BOLT, FLANGED HD.	
6	96726799	4	LOCKNUT, FLANGED HD.	

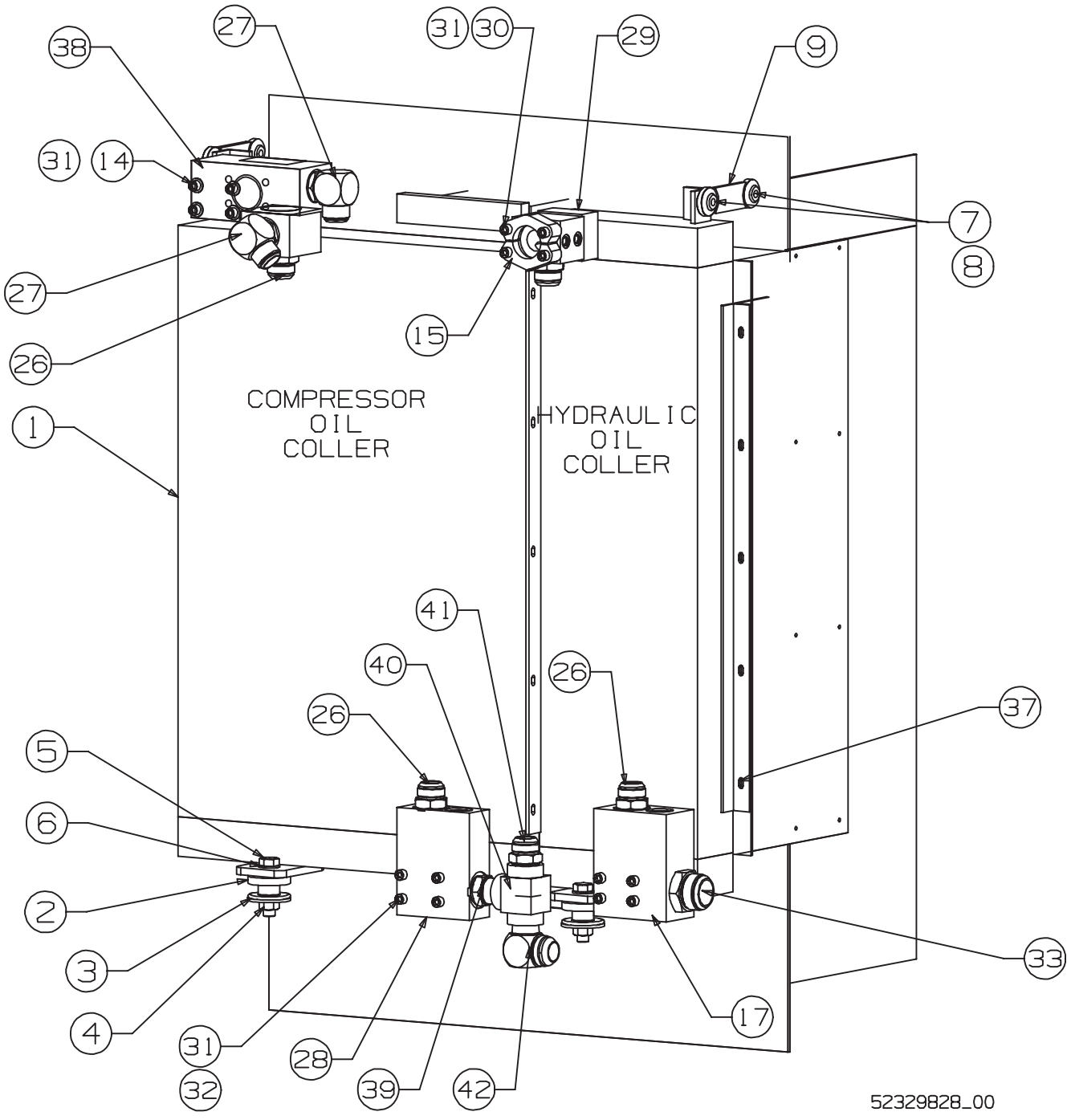
52314085 RADIATOR/CHARGE AIR COOLER ASSEMBLY



52314085 RADIATOR/CHARGE AIR COOLER ASSEMBLY

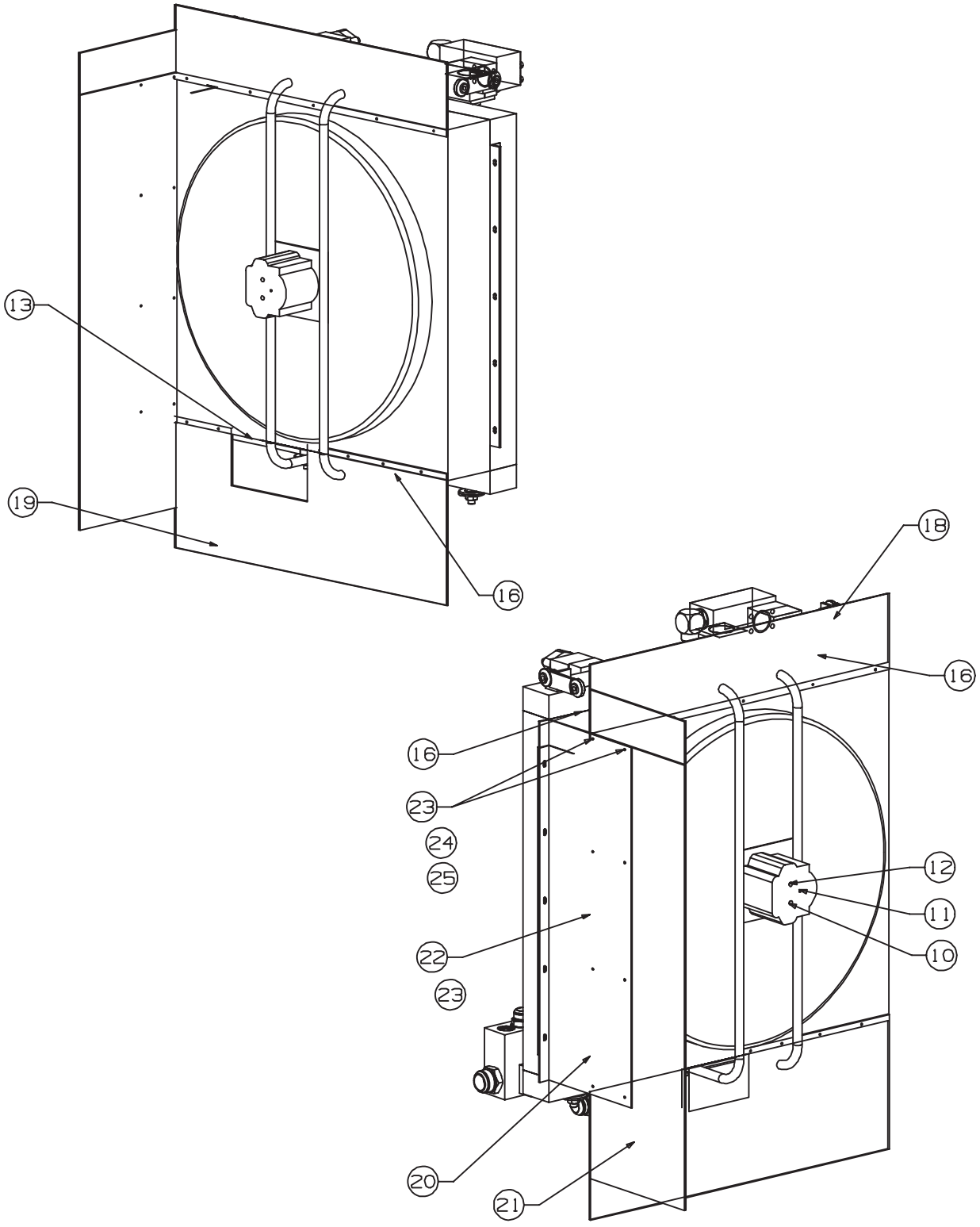
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52313756	1	COOLER, RADIATOR/CHARGE AIR *REFER TO PAGE 7.7–1*	
2	51061661	2	ISOLATOR	
3	52085172	2	WASHER, ISOLATOR	
4	96727755	2	LOCKNUT, FLANGED	
5	96704044	2	BOLT	
6	96702568	2	WASHER, FLAT	
7	96727185	4	BOLT, FLANGED	
8	96727730	4	LOCKNUT, FLANGED	
9	52116761	2	STRUT, SUPPORT	
10	95368890	1	ADAPTER	
11	95365078	1	ADAPTER	
12	95280186	1	ADAPTER	
13	95033601	1	PLUG, PIPE	
14	95303368	2	ADAPTER	
15	52316601	1	BRACKET, SUPPORT	
16	51874220	2	U–BOLT	
17	95280152	1	ADAPTER	
18	52316189	1	BAFFLE, COOLER	
19	52316197	1	BAFFLE, COOLER	
20	52316205	1	BAFFLE, COOLER	
21	52316213	1	BAFFLE, COOLER	
22	52306370	6	SCREW, SELF TAPPING	
23	52237179	26	WASHER	
25	96727193	4	BOLT, FLANGED HD.	
26	96726799	4	LOCKNUT, FLANGED HD.	
27	95370714	1	PLUG, PIPE	
28	56037179	1	FITTING, HOSE	
29	95922894	4	NUT, HEX	
30	52323011	1	HARNESS, CAC/RAD COOLER WIRING	

52329828 HYDRAULIC OIL/COMPRESSOR OIL COOLER ASSEMBLY



NOTE: REF. NOS. 34 & 35 ARE NOT ILLUSTRATED.

52329828 HYDRAULIC OIL/COMPRESSOR OIL COOLER ASSEMBLY



Ingersoll-Rand

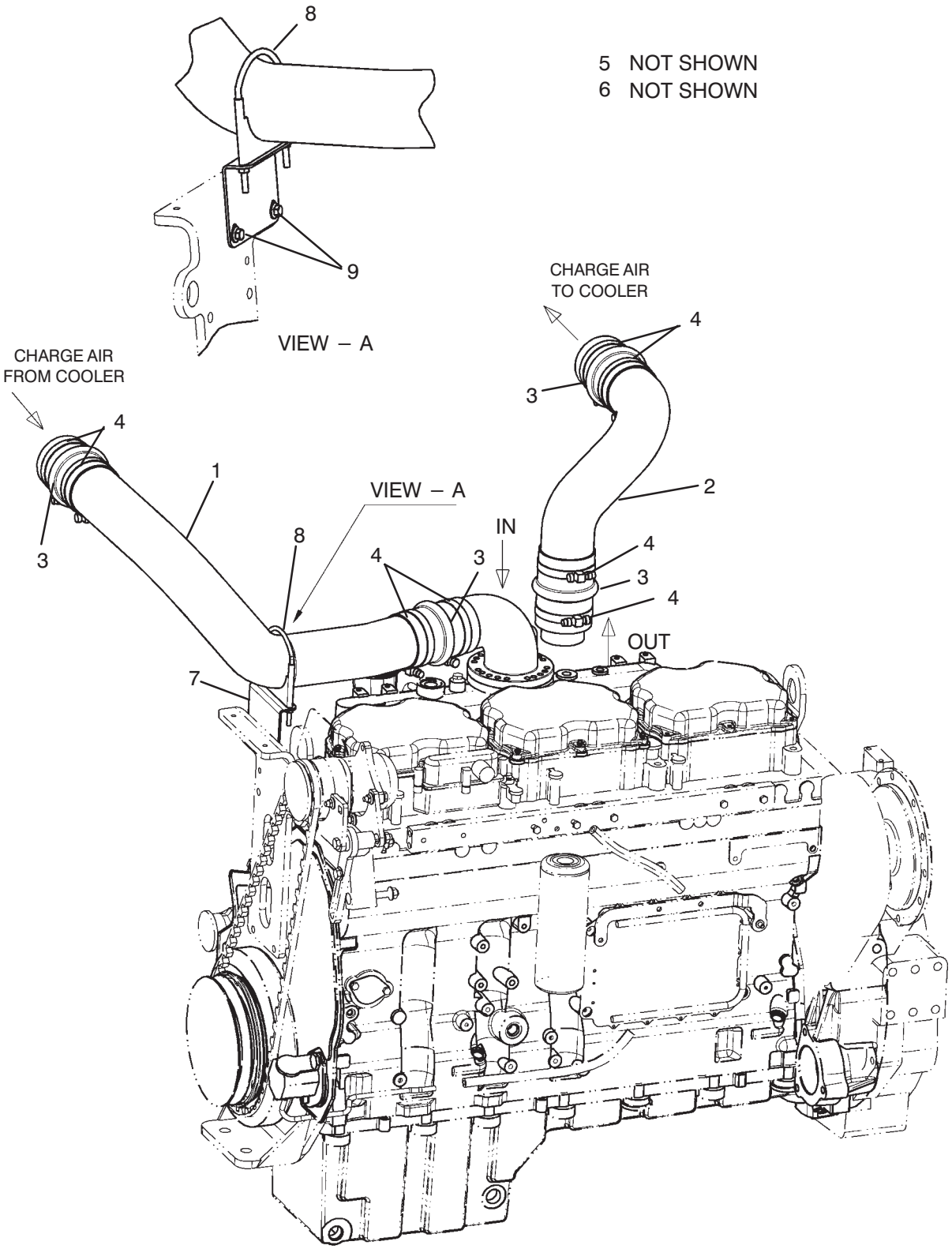
52329828 HYDRAULIC OIL/COMPRESSOR OIL COOLER ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57729063	1	COOLER, HYDRAULIC OIL/COMPRESSOR OIL	
	52284676	1	.MOTOR, COOLER FAN	
	52083805	1	..KIT, SEAL	
	52305323	1	.FINGERGUARD	
	52315983	1	.COOLER, OIL	
	57729188	1	.COOLER, OIL	
	52306859	1	.MOUNT, FAN MOTOR	
	52306875	1	.FAN	
	52316015	1	.SHROUD	
2	51061661	2	ISOLATOR	
3	52085172	2	WASHER, ISOLATOR	
4	96727755	2	LOCKNUT, FLANGED	
5	96704044	2	BOLT	
6	96702568	2	WASHER, FLAT	
7	96727185	4	BOLT, FLANGED	
8	96727730	4	LOCKNUT, FLANGED	
9	52116761	2	STRUT, SUPPORT	
10	95368890	1	ADAPTER	
11	95365078	1	ADAPTER	
12	95280186	1	ADAPTER	
13	52301041	1	SENSOR, TEMPERATURE (FAN)	
14	95055158	4	CAPSCREW	
15	56928534	1	KIT, SPLIT FLANGE	
16	95096434	2	PLUG, PIPE	
17	57729006	1	VALVE,HYD,LOWER BYPASS	
18	52316221	1	BAFFLE, COOLER	
19	52316239	1	BAFFLE, COOLER	
20	52316247	1	PLATE, BAFFLE	
21	52316254	1	BAFFLE, COOLER	
22	52306370	14	SCREW, SELF TAPPING	
23	52237179	30	WASHER, FENDER	
24	96728571	8	CAPSCREW, HEX.	
25	96726781	8	NUT	
26	95310116	3	ADAPTER	
27	95431292	1	ADAPTER	
28	57668592	1	VALVE, COOLER BYPASS	
			REFER TO PAGE 9.45–1	
29	57728990	1	VALVE,HYD,UPPER BYPASS	
30	95055133	8	CAPSCREW, SOC. HD.	

52329828 HYDRAULIC OIL/COMPRESSOR OIL COOLER ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
31	95955936	16	LOCKWASHER, HI-COLLAR	
32	95055091	4	CAPSCREW, SOC. HD.	
33	95371241	1	ADAPTER	
35	52323003	1	HARNESS, HOC/COC WIRING	
			REFER TO PAGE 12.8–1	
36	56928559	1	ADAPTER	
37	95322871	1	CLAMP, HOSE	
38	57705113	1	VALVE,THRML COMPRESSOR	
			REFER TO PAGE 7.17–1	
39	52165776	1	FITTING	
40	95678041	1	FITTING	
41	95208682	1	FITTING	
42	95279477	1	FITTING	

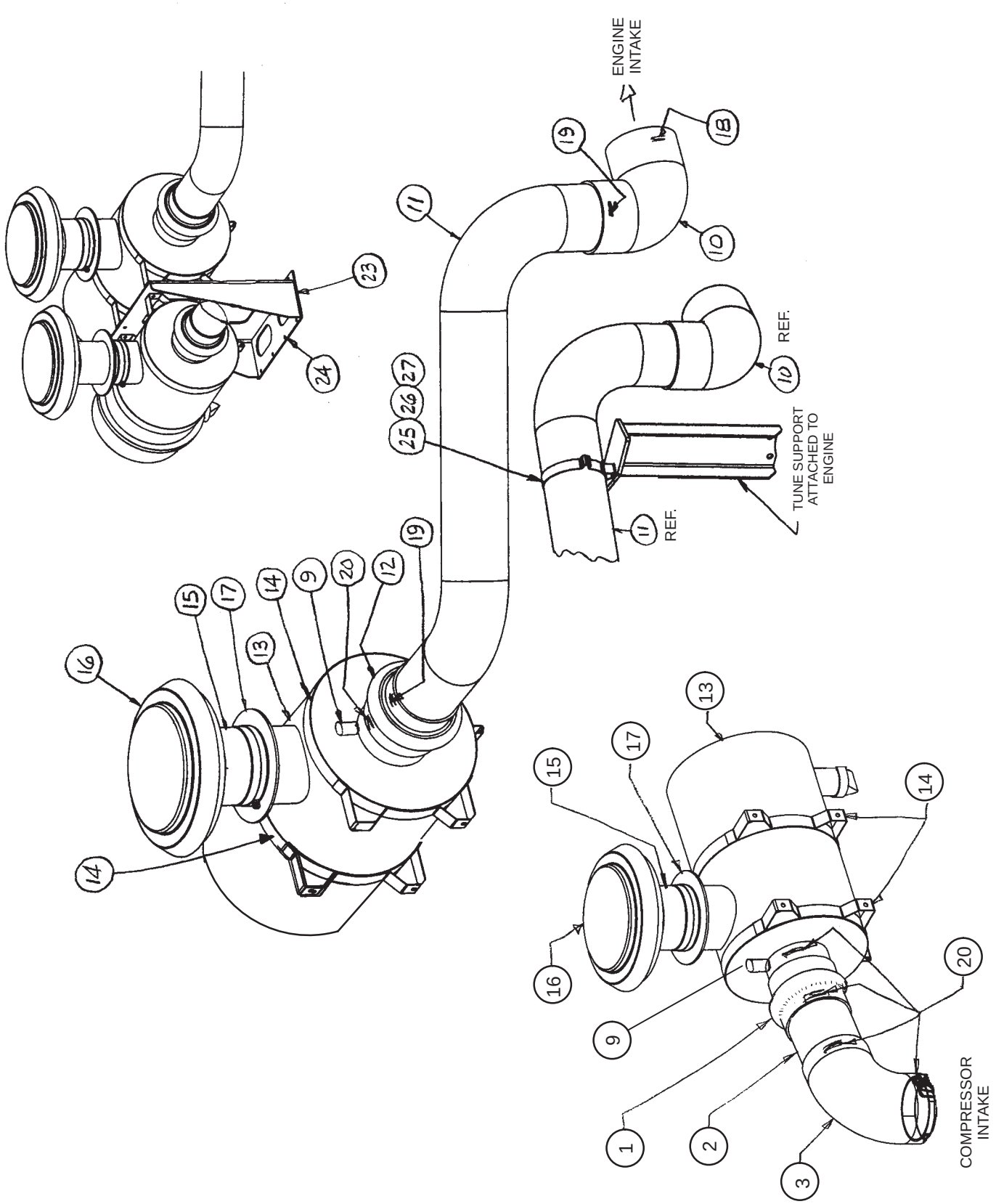
52314051 CHARGE AIR COOLER PIPING



52314051 CHARGE AIR COOLER PIPING

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52313780	1	TUBE, AIR COOLER	
2	52313822	1	TUBE, AIR COOLER	
3	57580516	4	CONNECTOR, CHARGE AIR	
4	56280852	8	CLAMP, HOSE	
5	57578718	100	INSULATION, WRAP (FT)	
6	51038214	25	WIRE, LOCKING (FT)	
7	52319449	1	BRACKET, SUPPORT	
8	51300010	1	CLAMP, MUFFLER	
9	96727169	2	BOLT, FLANGED HD.	

52329786 AIR INTAKE ASSEMBLY

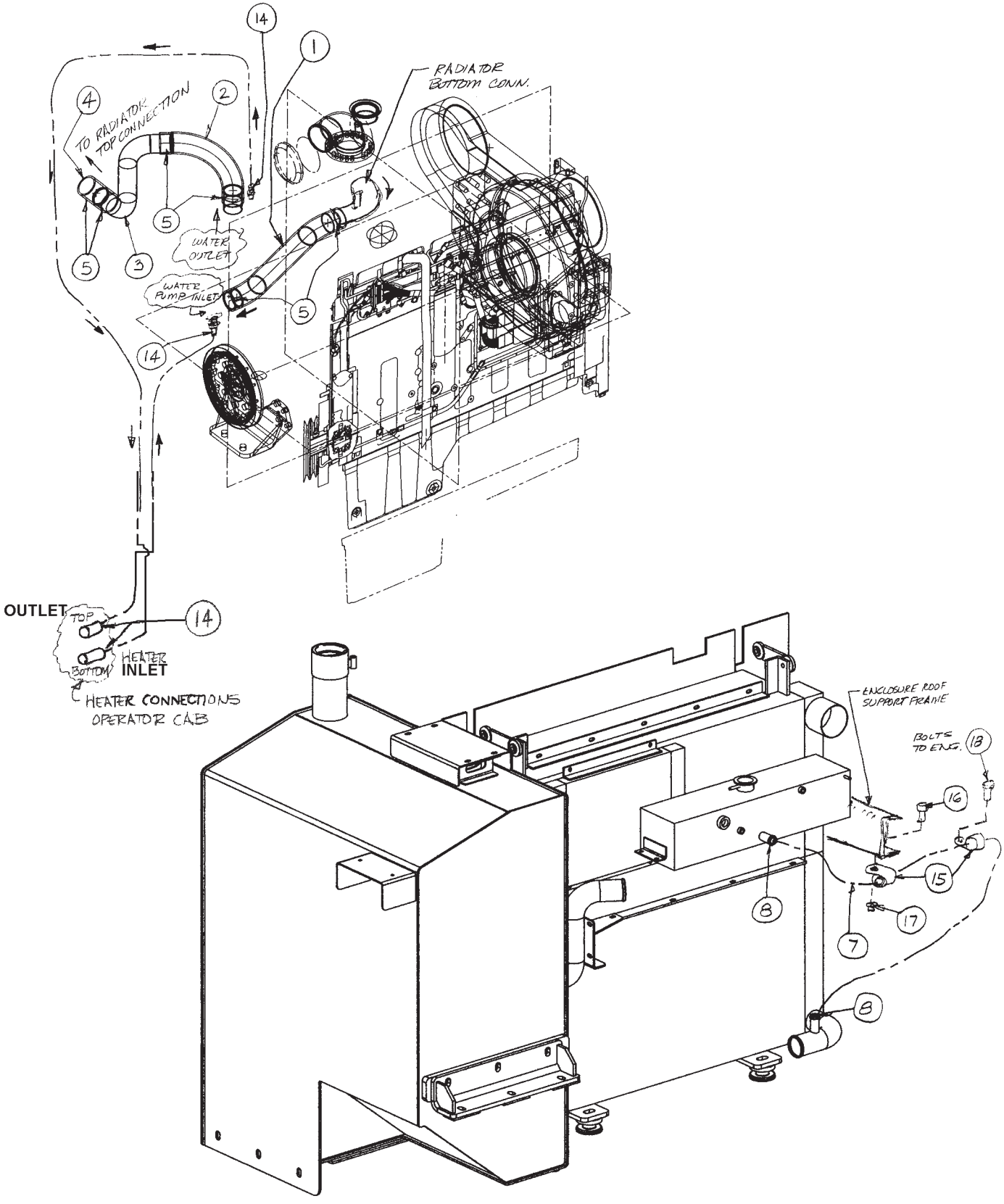


52329786 AIR INTAKE ASSEMBLY

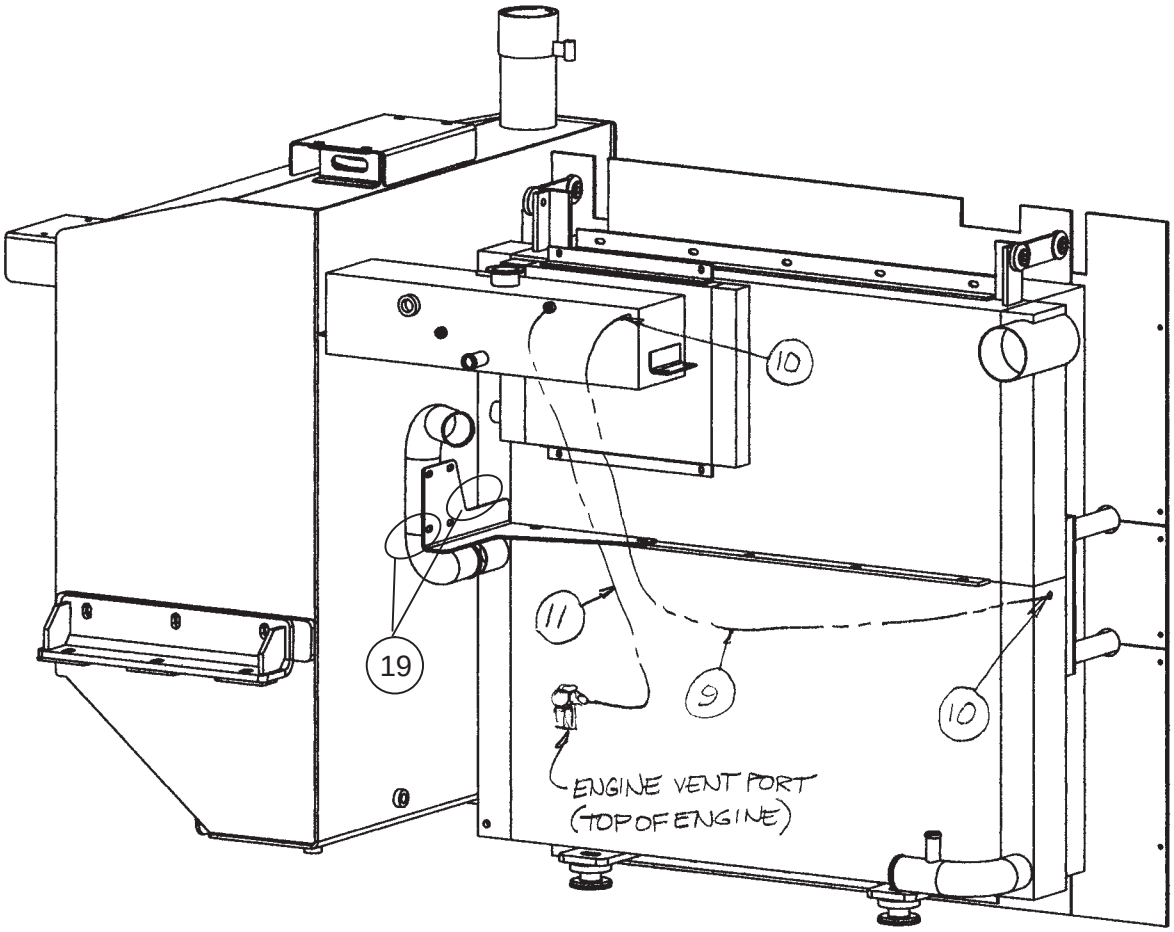
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51713220	1	HUMP, STRAIGHT	
2	52325198	1	TUBE, INTAKE	
3	50424084	1	ELBOW, INTAKE	
9	51618296	2	INDICATOR, SERVICE	
10	51713261	1	ELBOW, REDUCER	
11	52313723	1	TUBE, INTAKE	
12	58044561	1	HUMP, STRAIGHT REDUCER	
13	35711209	2	FILTER, INTAKE	
			REFER TO PAGE 7.10–1	
14	58044744	4	BAND, MOUNTING	
15	52313681	2	EXTENSION, AIR STACK	
16	35112259	2	HOOD, INLET	
17	52106051	2	RING, SEAL	
18	51713287	1	CLAMP, T–BOLT	
19	51904787	3	CLAMP, HOSE	
20	57440554	5	CLAMP, HOSE	
21	96726914	8	BOLT, HEX. FLANGED HD.	
22	96726807	8	NUT, HEX. FLANGED HD.	
23	52313905	1	BRACKET, AIR INTAKE MOUNTING	
24	96727169	8	BOLT, FLANGED HD.	
25	57064941	1	BAND, MOUNTING	
26	96727797	2	BOLT, FLANGED HD.	
27	96726799	2	LOCKNUT, FLANGED HD.	

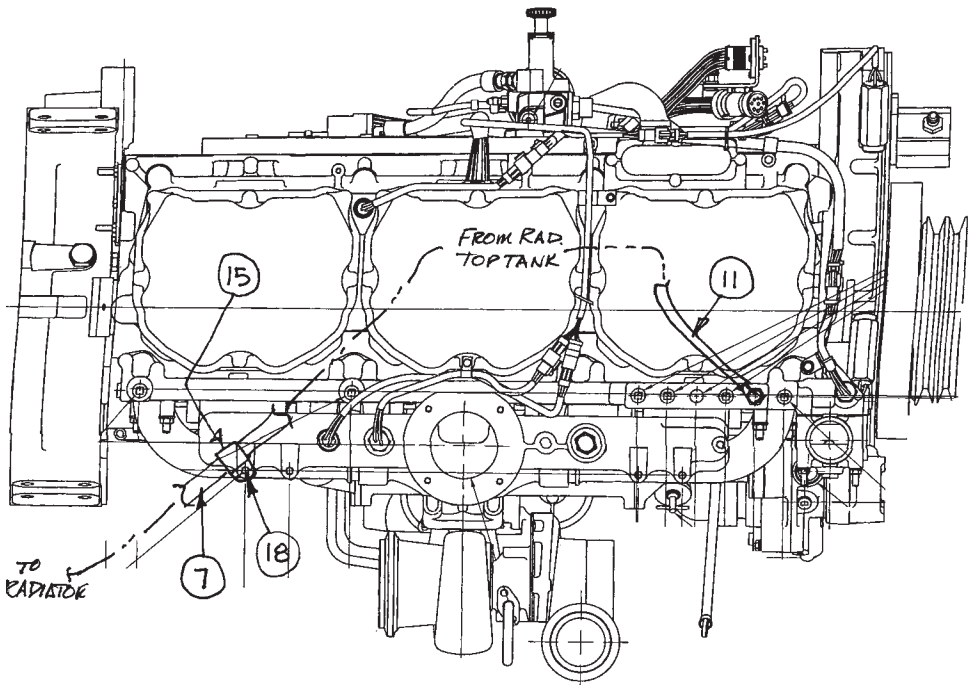
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52314069 ENGINE/RADIATOR PIPING



52314069 ENGINE/RADIATOR PIPING

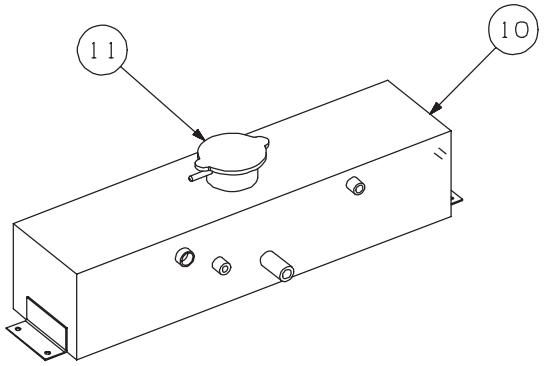


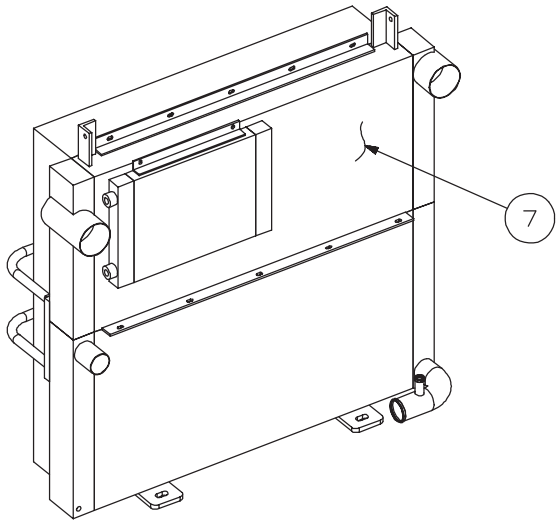


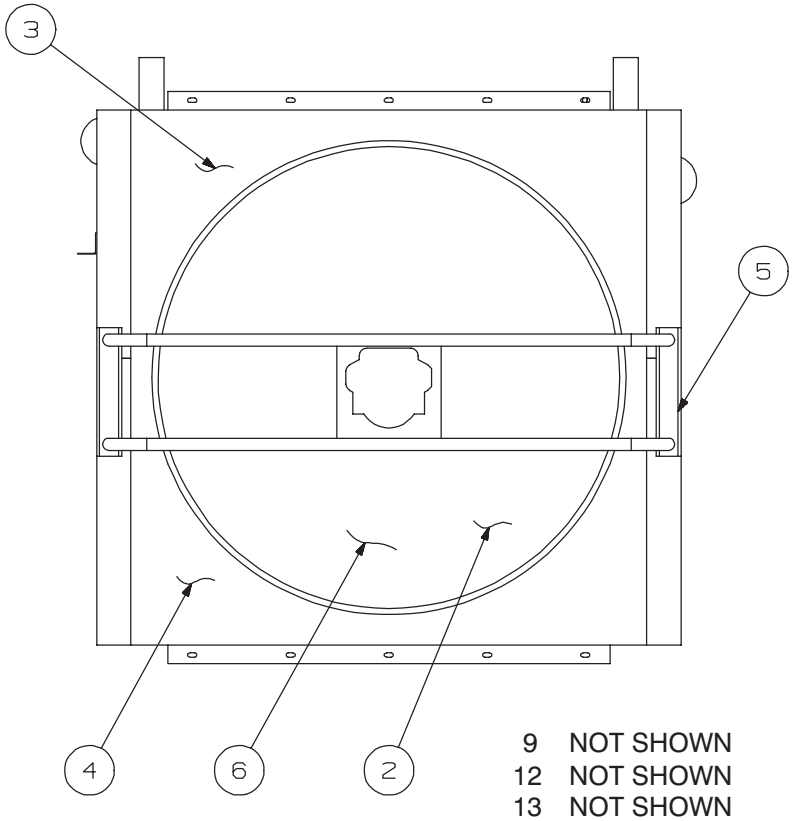
52314069 ENGINE/RADIATOR PIPING

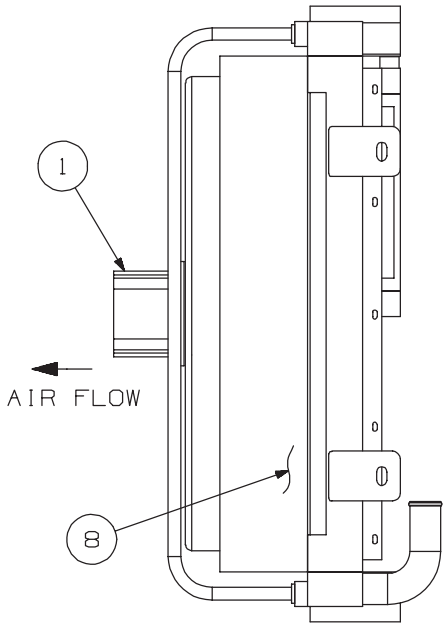
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51874246	1	HOSE, FLEXIBLE	
2	51874238	1	HOSE, FLEXIBLE	
3	52313798	1	TUBE, RADIATOR	
4	52313830	1	HOSE, COOLANT	
5	51874253	6	CLAMP, HOSE	
8	95235131	2	CLAMP, HOSE	
10	56942691	2	CLAMP, HOSE	
14	95220844	4	CLAMP, HOSE	
15	95301875	2	CLAMP, VINYL	
16	96727250	1	BOLT, FLANGED HD.	
17	96726815	1	LOCKNUT, FLANGED HD.	
18	96727169	1	BOLT, FLANGED HD.	
19	95396776	2	CLAMP, VINYL	

52313756 RADIATOR/CHARGE AIR COOLER









BOTTOM VIEW

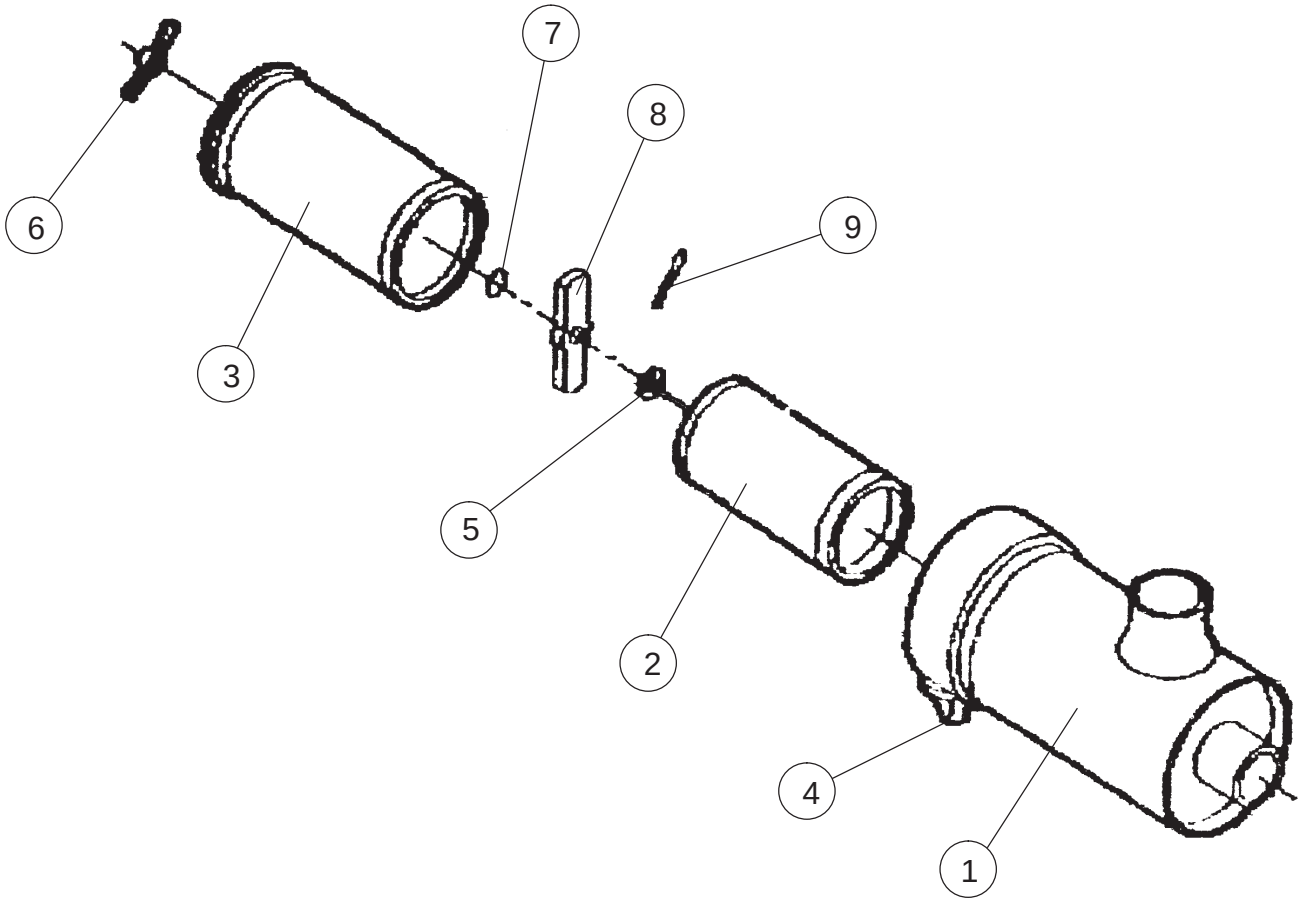
C52313756_01

9 NOT SHOWN
12 NOT SHOWN
13 NOT SHOWN

52313756 RADIATOR/CHARGE AIR COOLER

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52284676	1	MOTOR, COOLER FAN	
	52083805	1	.KIT, SEAL	
2	52305323	1	FINGERGUARD	
4	52315967	1	RADIATOR	
5	52306859	1	MOUNT, FAN MOTOR	
6	52306875	1	FAN	
7	52315991	1	COOLER, FUEL	
8	52316015	1	SHROUD	
9	52122330	2	PETCOCK (NOT ILLUSTRATED)	
10	52322500	1	TANK, SURGE	
11	51792323	1	CAP, RADIATOR	
12	57730376	1	FITTING, BRASS	
13	57547580	1	GUAGE, SIGHT	

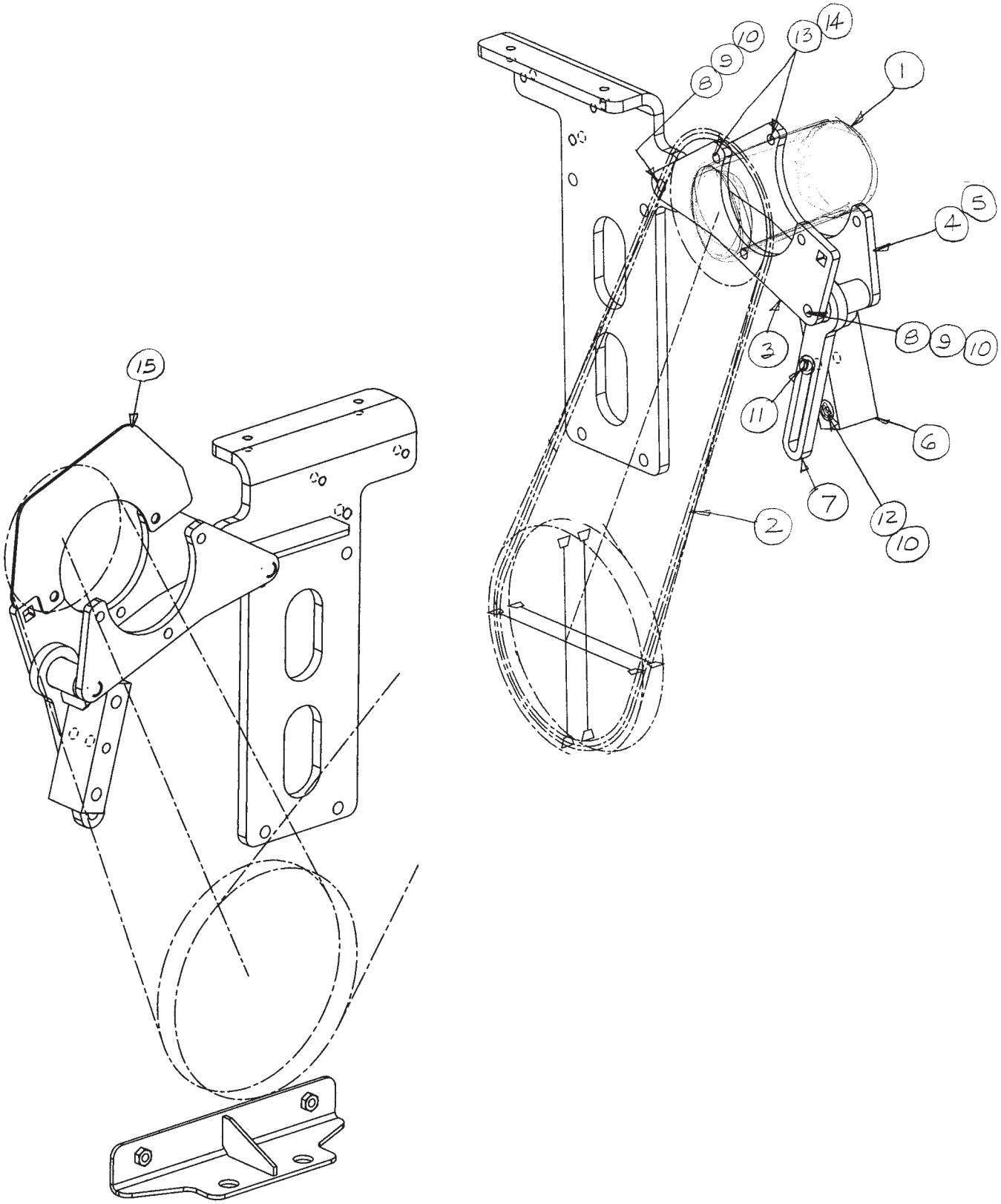
35711209 INTAKE FILTER



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	++	1	BODY	
2	35123520	1	ELEMENT, SAFETY	
3	35123512	1	ELEMENT, PRIMARY	
4	35123587	1	VALVE, ACTUATOR	
5	35123546	1	GASKET	
6	35123553	1	NUT, WING	
7	35123561	1	CLIP	
8	35255869	1	NUT	
9	35123538	1	PIN	

++ **NOTICE:** THIS PART IS NOT SOLD SEPARATELY.

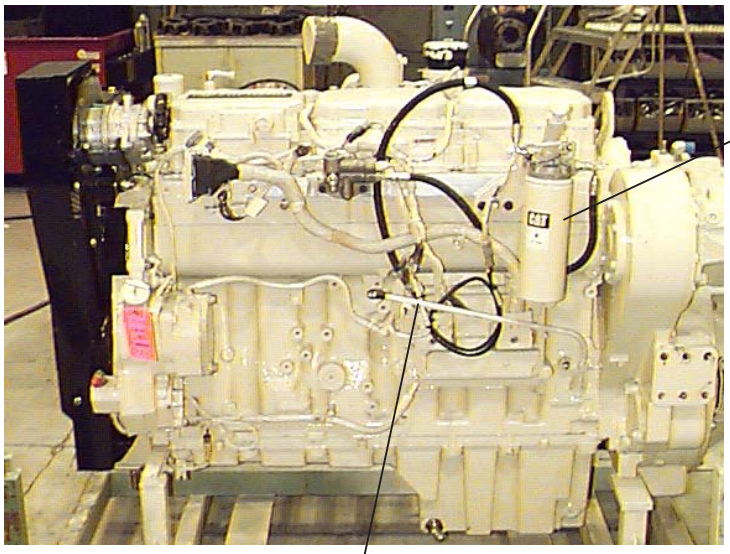
52319563 A/C COMPRESSOR INSTALLATION

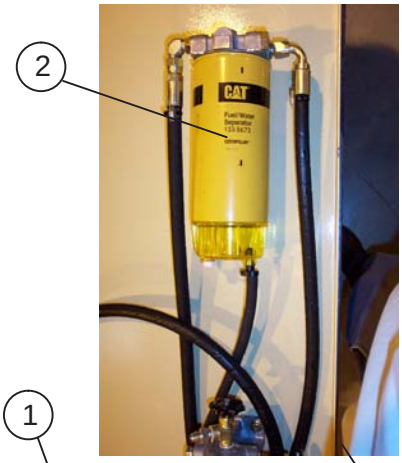


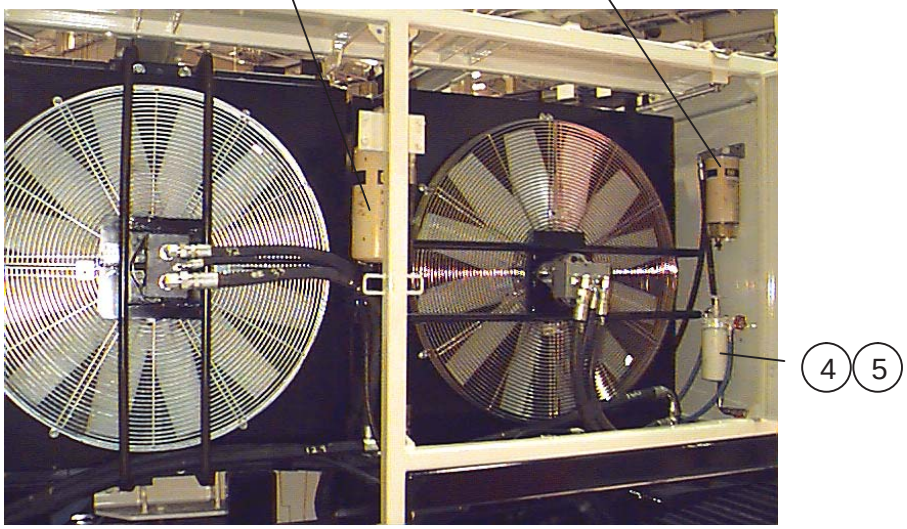
52319563 A/C COMPRESSOR INSTALLATION

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52319571	1	COMPRESSOR, A/C	
2	52319589	1	V–BELT, A/C COMPRESSOR	
3	52319456	1	PLATE, FRONT MOUNTING	
4	52319464	1	PLATE, REAR MOUNTING	
5	52319472	2	SPACER	
6	52319480	1	BAR, TAKEUP	
7	52319498	1	ARM, TAKEUP	
8	96727896	2	BOLT, HEX. HD.	
9	96702535	2	WASHER, FLAT	
10	96726815	4	LOCKNUT, FLANGED HEAD	
11	96727177	1	BOLT, FLANGED HEAD	
12	96708359	2	CAPSCREW, SOC. HD.	
13	96726708	6	BOLT, FLANGED HEAD	
14	96726807	6	LOCKNUT, FLANGED HD.	
15	52321460	1	PLATE, GUARD	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.







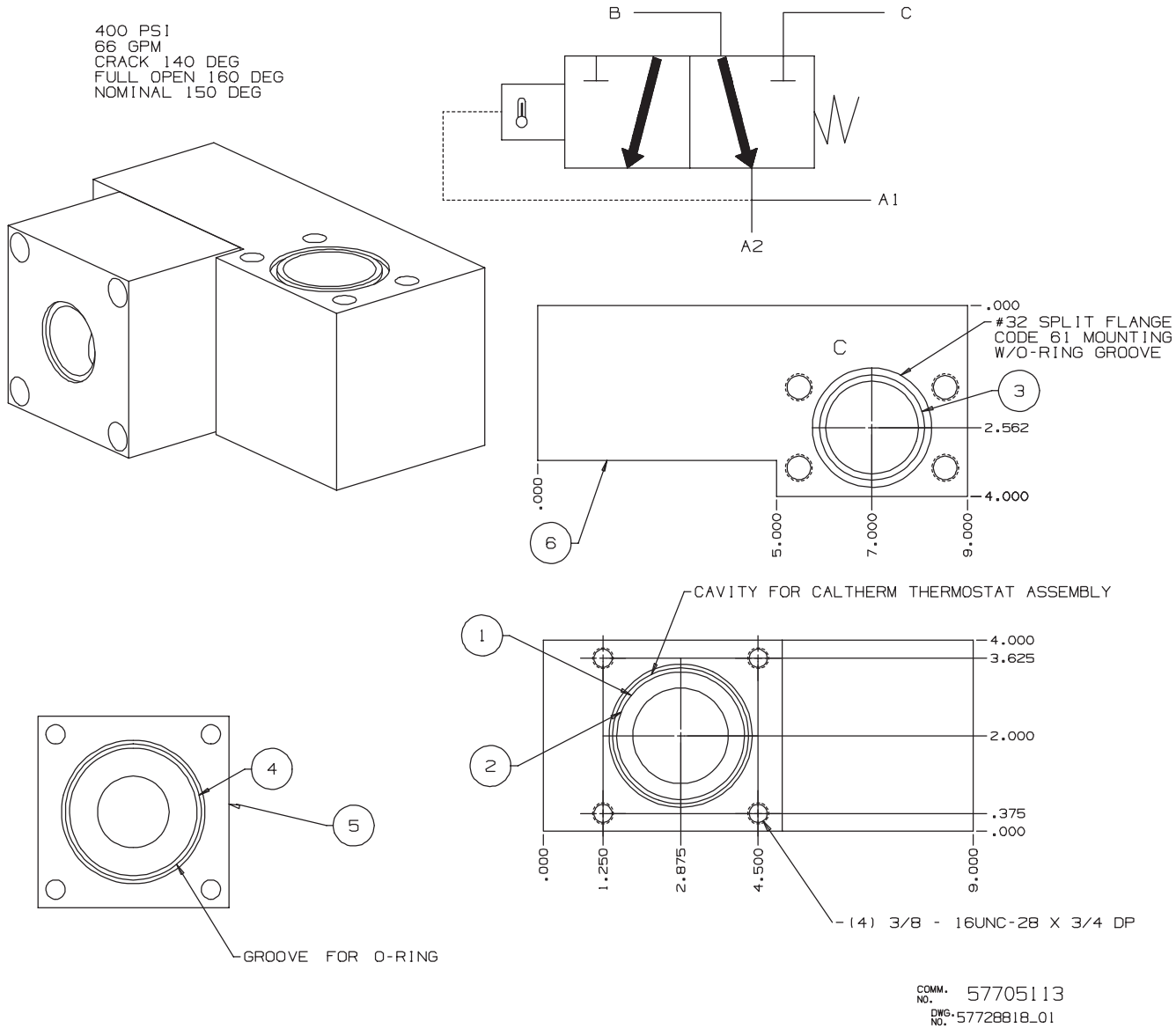
CAB INSTALLATION

52311008 ENGINE

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52183233	1	FILTER, LUBE OIL	
2	52322443	1	SEPARATOR, PRIMARY FUEL FILTER/WATER	
	52322450	1	.BOWL, WATER SEPARATOR	
3	52322468	1	FILTER, SECONDARY FUEL	
4	57511446	1	ELEMENT, COOLANT CONDITIONER PRE-CHARGE (USED WHEN COOLING SYSTEM IS DRAINED AND REFILLED ONLY)	
5	56264245	1	ELEMENT, COOLANT CONDITIONER MAINTENANCE (USED ONLY WHEN NOT CHANGING THE COOLANT)	
6	52322419	1	ASSEMBLY, DIP STICK	
7	52322427	1	ASSEMBLY, DIP STICK TUBE	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

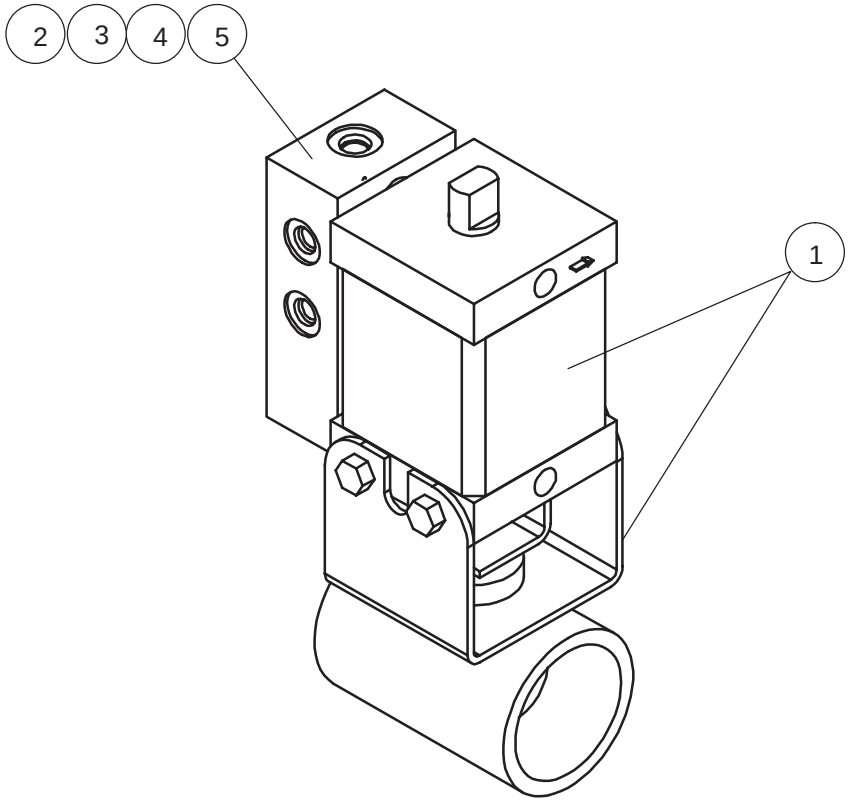
57705113 VALVE, THERMAL COMPRESSOR



57705113 VALVE, THERMAL COMPRESSOR

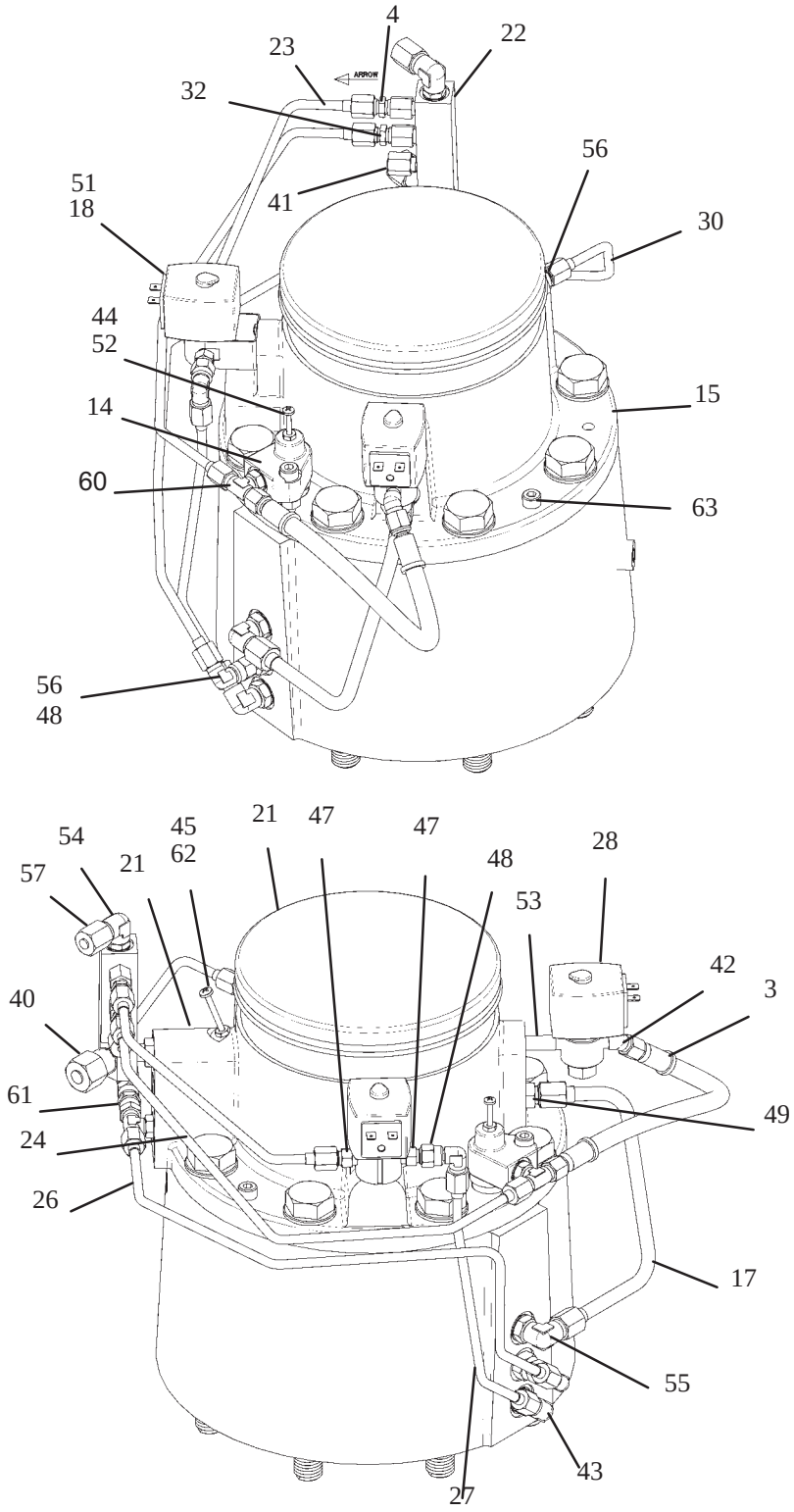
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57734329	1	THERMOSTAT,CALTHERM	
2	57734337	1	SEAL	
3	57734360	1	O–RING	
4	57734378	1	O–RING	
5	57734386	1	VALVE, BODY	
6	57734394	1	VALVE, BODY	

52326832 AIR BLOW ACTUATOR VALVE

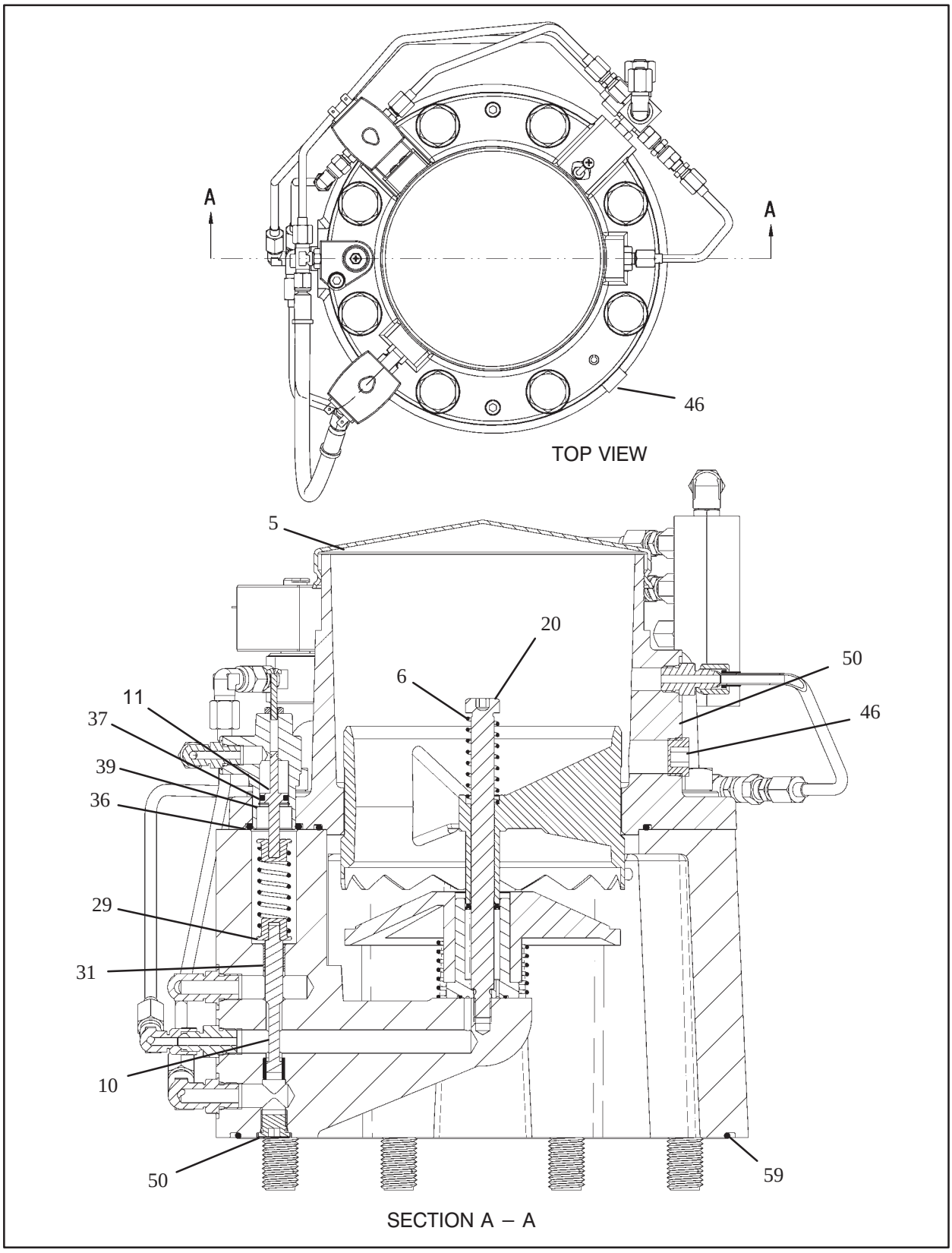


REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52288099	1	VALVE, AIR BLOW	
2	52330859	1	COIL	
3	52330867	1	CARTRIDGE, VALVE	
4	52330875	1	.KIT, SEAL	
5	95357786	2	O–RING	

39922877 AIR END UNLOADER

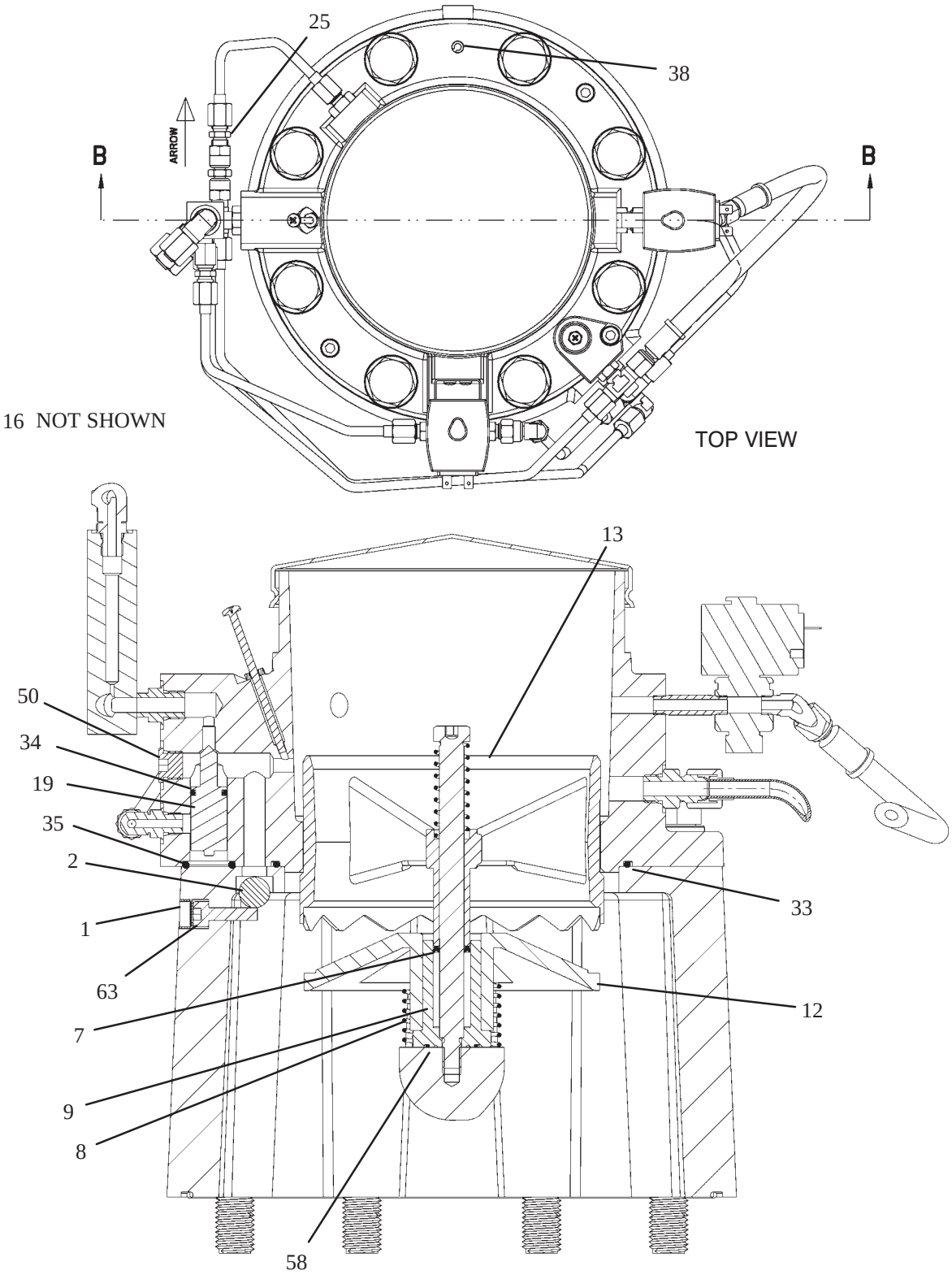


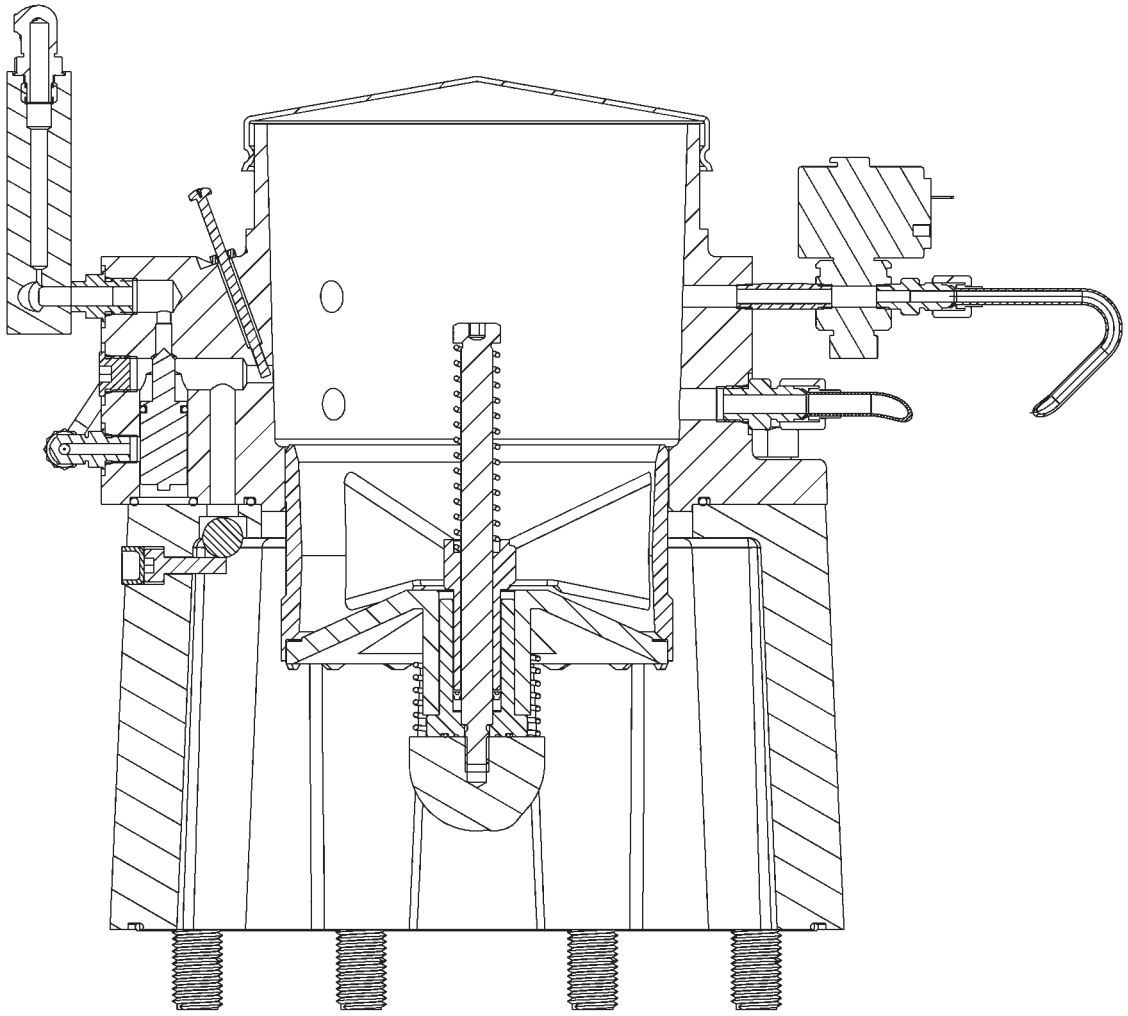
39922877 AIR END UNLOADER



WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

39922877 AIR END UNLOADER





SECTION B – B

(REFERENCE VIEW ONLY SHOWING
VALVE IN THE UNLOADED POSITION)

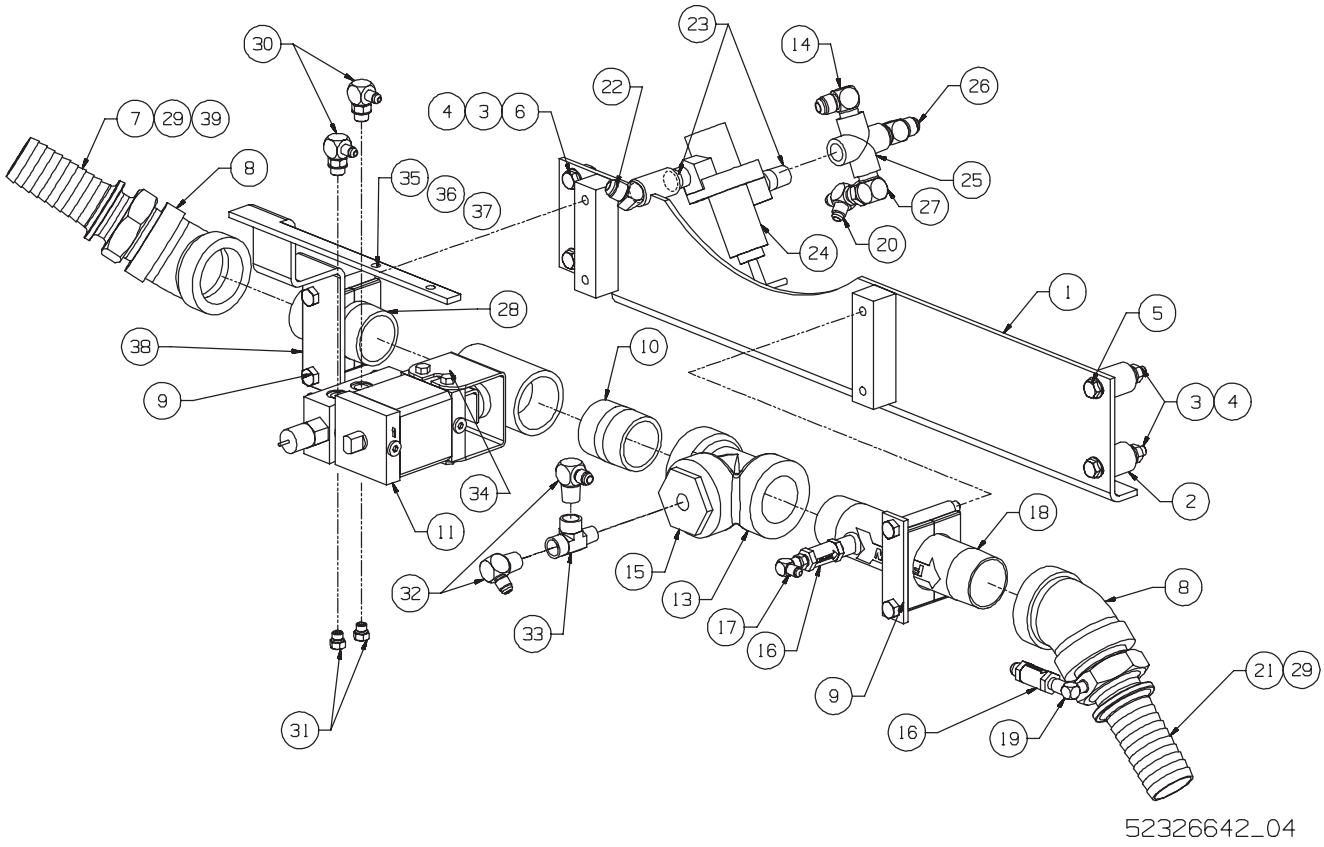
39922877 AIR END UNLOADER

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	35376318	1	BALL,STEEL	
2	39113543	1	HOSE	
3	39301940	1	ORIFICE, SCAVENGE	
4	39325113	1	COVER, INLET	
5	39329701	2	SPRING,COIL,COMPRESSION	
6	39329719	1	SEAL, ROD	
7	39329800	1	SPRING, CHECK VALVE	
8	39590963	1	CYLINDER, SUPPORT	
9	39591326	1	VALVE, CONTROL	
10	39591920	1	PISTON, CONTROL	
11	39913876	1	VALVE, CHECK INLET MACH	
12	39913967	1	SLEEVE, INLET	
13	39915699	1	VALVE, HI–LO CONTROL	
14	39915798	1	FLANGE, INLET, UNLOADER	
15	39919501	1	HOUSING, UNLOADER	
16	39923750	1	TUBE	
17	39923834	1	VALVE, SOLENOID	
18	39932256	1	VALVE, ANTI–RUMBLE	
19	39932686	1	BOLT, SHDR	
20	39932918	1	SUB ASSEMBLY, HR2	
21	39932959	1	MANIFOLD ASM, HR2	
22	39932975	1	TUBE	
23	39932983	1	TUBE	
24	39932991	2	ORIFICE, UNION	
25	39933007	1	TUBE	
26	39933015	1	TUBE	
27	54371612	1	VALVE, SOLENOID	
28	54480496	2	BAR	
29	54505391	1	TUBE, ORIFICE VENT	
30	54577986	1	BEARING	
31	95008215	1	O–RING	
32	95021721	1	O–RING	
33	95022141	1	O–RING	
34	95022166	1	O–RING	
35	95045092	1	O–RING	
36	95098653	1	PIN	
37	95223640	1	RING, RETAINING INTERNAL	
38	95257325	1	CAP	
39	95257333	1	CAP	

39922877 AIR END UNLOADER

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
40	95302170	1	FITTING, HYD	
41	95365094	1	ELBOW, 90 DEG.	
42	95923033	1	NUT	
43	95923041	1	NUT	
44	95937579	2	CONNECTOR	
45	95938049	2	ELBOW	
46	95938114	1	CONNECTOR	
47	95938932	2	PLUG, SOCKET HD.	
48	95942546	2	SCREW	
49	95942579	1	SCREW	
50	95946059	1	NIPPLE	
51	95959730	1	ELBOW	
52	95976775	1	ELBOW	
53	95981429	2	CONNECTOR	
54	95984175	1	CAP	
55	95985859	1	O–RING	
56	95985891	1	O–RING	
57	95985941	2	TEE, BRANCH	
58	95986014	1	CONNECTOR	
59	95992475	1	SCREW	
60	96708060	3	SCREW, SOCKET HEAD	
61	96721832	8	SCREW, HEX HEAD	
62	96735543	1	NUT, HEX	
63	96740345	1	SCREW, SOCKET HEAD	

52326642 MAIN AIR PIPING ASSEMBLY

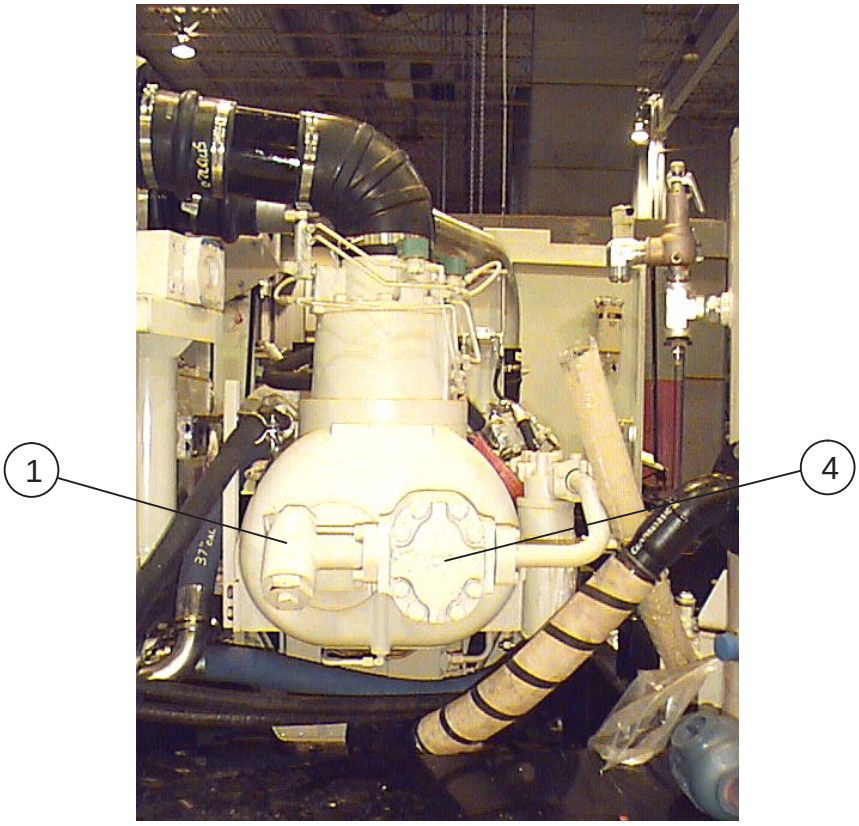


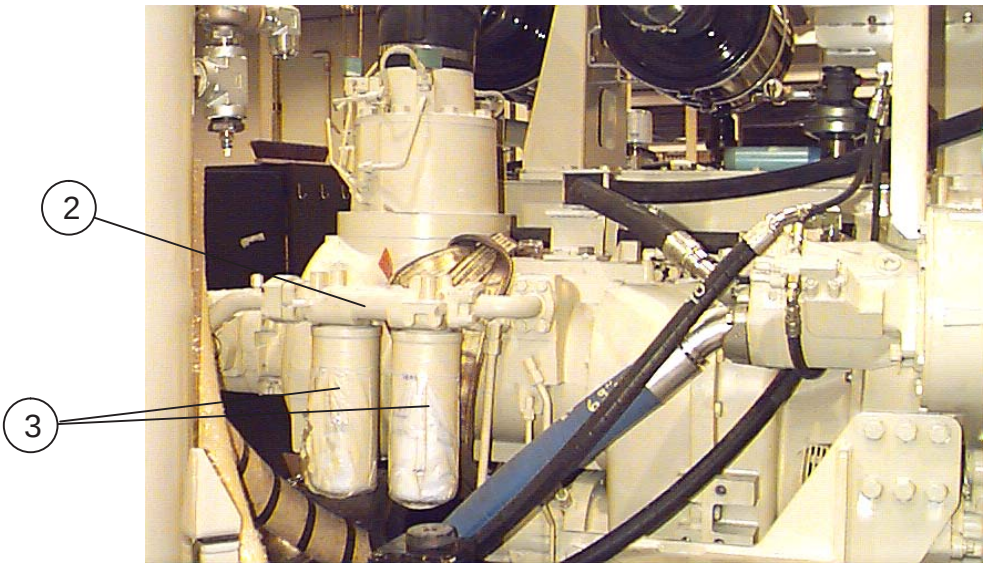
52326642 MAIN AIR PIPING ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.1
1	52327236	1	BRACKET, MAIN AIR PIPING	
2	52327244	2	SPACER, PIPING BRACKET	
3	96727300	4	NUT, HEX. HD	
4	96701982	4	WASHER, PLAIN	
5	96727680	2	CAPSCREW, HEX. FLANGED	
6	96727003	2	CAPSCREW, HEX. FLANGED	
7	50023910	1	STEM, HOSE	
8	95674982	2	ELBOW, 45 DEGREE	
9	52319332	2	ASSEMBLY, PIPE CLAMP	
10	95097291	1	NIPPLE	
11	52326832	1	VALVE, AIR BLOW ACTUATOR	
			REFER TO PAGE 8.0–1	
13	95663191	1	TEE	
14	95279527	1	ELBOW	
15	95038261	1	BUSHING, REDUCING	
16	50573823	2	VALVE, CHECK	
17	95326930	1	ELBOW	
18	50964576	1	LUBRICATOR	
19	95279998	1	ADAPTER	
20	95473443	1	ADAPTER	
21	52326733	1	STEM, HOSE	
22	95279097	1	ADAPTER	
23	95243010	2	NIPPLE, PIPE	
24	52089810	1	REGULATOR	
25	95378907	1	ADAPTER	
26	95434353	1	ADAPTER	
27	95367025	1	ADAPTER	
28	95243200	1	NIPPLE	
29	50743731	2	CLAMP, HOSE	
30	95365094	2	ELBOW	
31	95666996	2	PLUG	
32	95279527	2	ELBOW	
33	95264941	1	TEE	
35	57064941	1	BAND, MOUNTING	
36	96727797	2	BOLT	
37	96726799	2	NUT	
38	57745275	1	BRACKET	
39	57358145	1	CABLE, HOSE RESTRAINT	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

42535294 AIR END

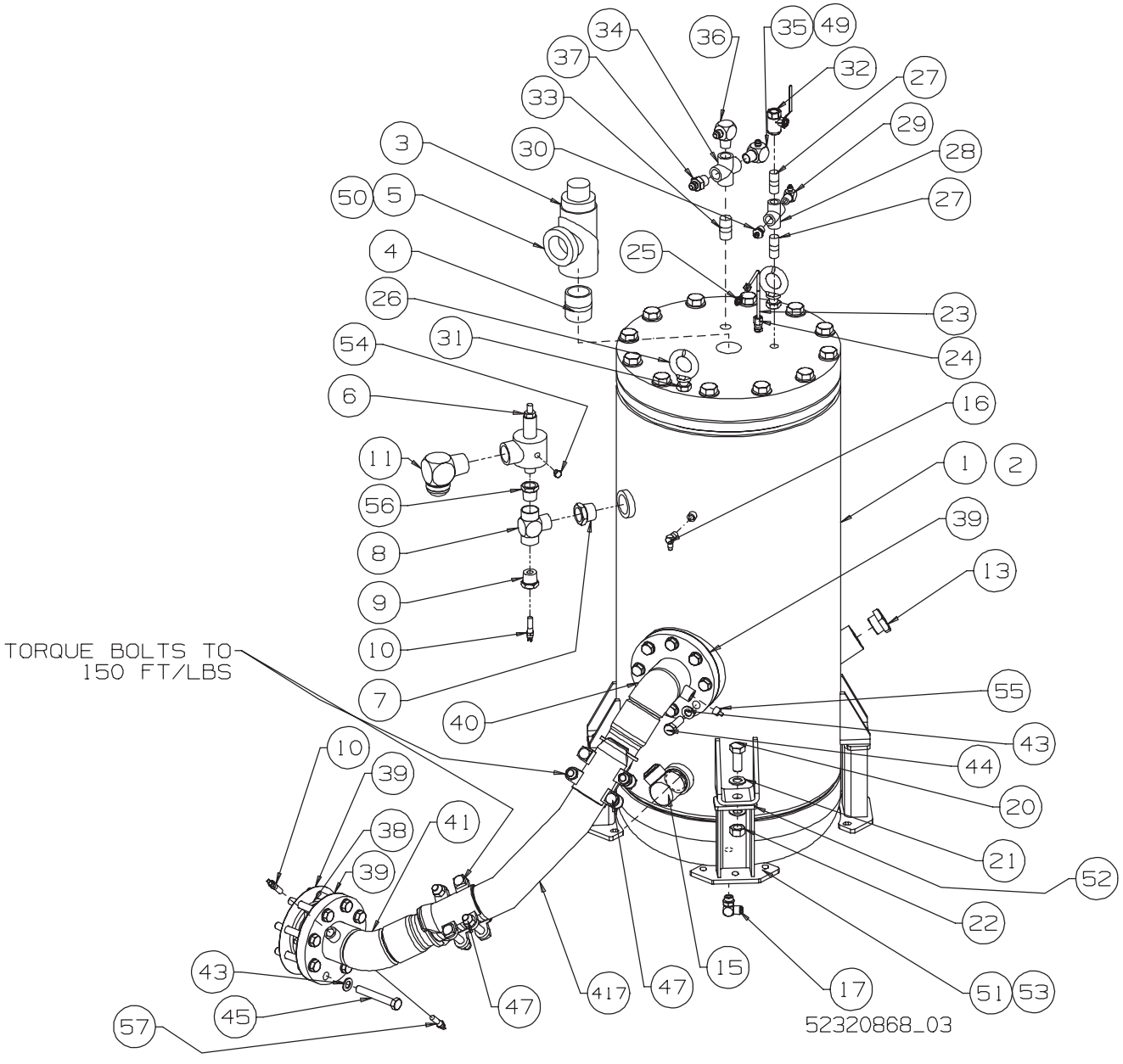




42535294 AIR END

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	35092279	1	ASSEMBLY, AIR STRAINER	
	35277797	1	.O–RING	
	35370063	1	.ELEMENT, STRAINER	
	35609098	1	.PLUG, STRAINER	
	36751295	1	.BODY, STRAINER	
2	36860476	1	FILTER, BASE	
3	36860336	2	ELEMENT, OIL FILTER	
4	36861144	1	PUMP, OIL	
5	22098982	1	SET, GEAR (NOT ILLUSTRATED)	

52320868 SEPARATOR TANK ASSEMBLY (ASME)



12 NOT SHOWN

52320868 SEPARATOR TANK ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57698862	1	TANK, SEPARATOR (ASME)	
2	57569758	1	ELEMENT, SEPARATOR	
3	57391047	1	VALVE, MINIMUM PRESSURE	
4	95097291	1	NIPPLE, PIPE	
5	50023910	1	STEM, HOSE	
6	35596733	1	VALVE, SAFETY RELIEF	
7	52226164	1	NIPPLE, PIPE	
8	95323432	1	TEE	
9	52198397	1	FITTING, HYD.	
10	36865756	1	SWITCH, THERMAL	
11	95279469	1	FITTING, HYD.	
12	39476916	1	GLASS, SIGHT	
13	35579630	1	PLUG	
15	95431292	1	ELBOW	
16	95293403	1	ELBOW	
17	95303335	1	ELBOW	
20	96716337	4	CAPSCREW, HEX. HD.	
21	96702568	8	WASHER, FLAT	
22	96727136	4	NUT, HEX.	
23	39871694	1	TUBE, SCAVENGE	
24	39417118	1	ADAPTER	
25	39322748	1	ADAPTER, ORIFICE	
26	95235370	2	EYE, LIFTING	
27	95242558	2	NIPPLE	
28	95378907	1	TEE	
29	95279527	1	ELBOW	
30	95330023	1	ADAPTER	
31	95922928	2	NUT, HEX.	
32	50947357	1	VALVE, BALL	
33	95242525	1	NIPPLE	
34	95364956	1	TEE	
35	95356721	1	ELBOW	
36	95279386	1	ELBOW	
37	95219739	1	ADAPTER	
38	36843720	1	VALVE, CHECK	
39	95225116	3	GASKET, COMPRESSOR DISCHARGE	

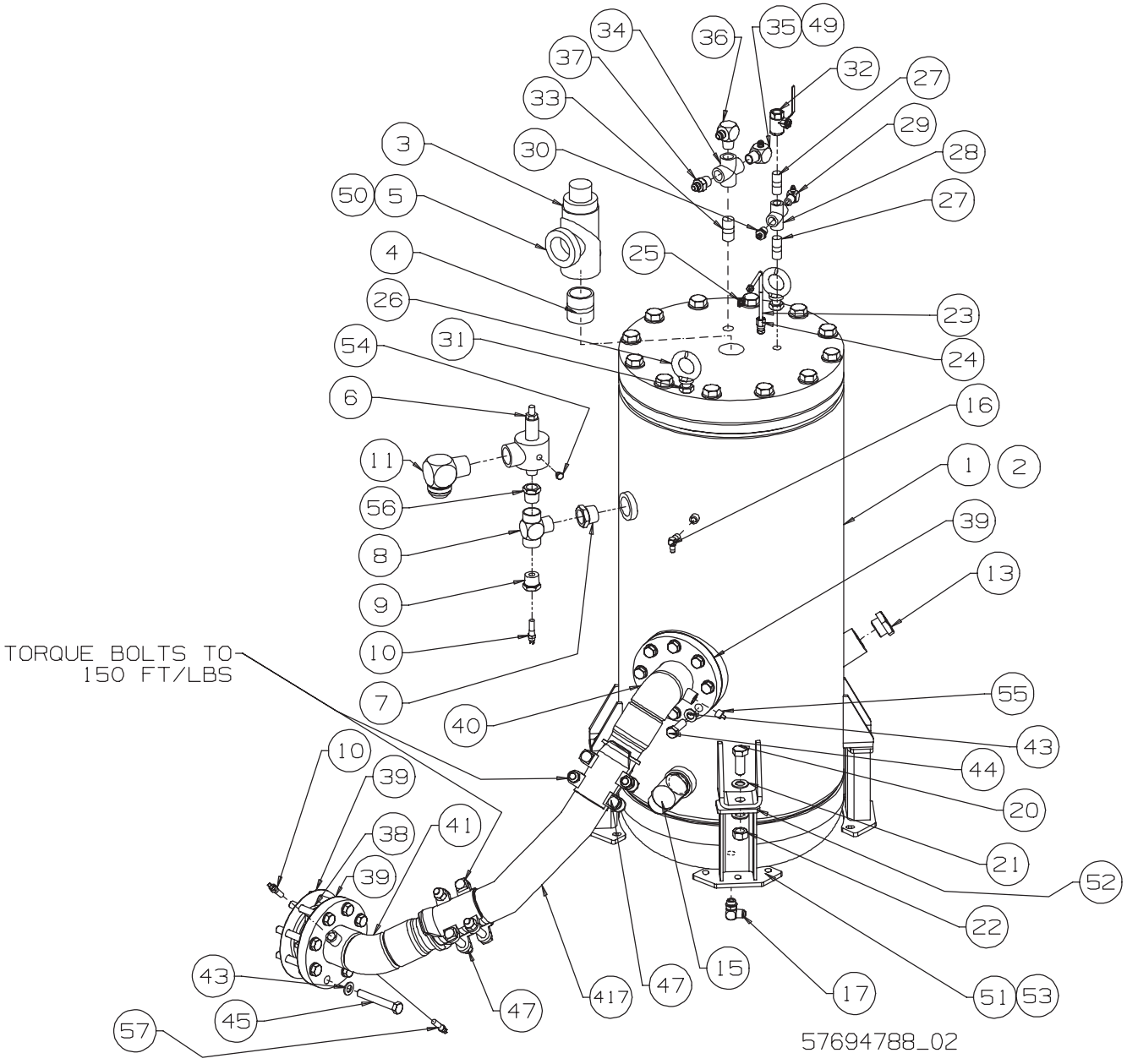
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52320868 SEPARATOR TANK ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
40	52323102	1	PIPE, SEPARATOR TANK INLET	
41	52323094	1	PIPE, AIR END OUTLET	
43	96702550	16	WASHER, FLAT	
44	96703962	8	CAPSCREW, HEX. HD.	
45	96705504	8	CAPSCREW, HEX. HD.	
47	57546061	2	CLAMP, HOSE	
49	95257341	1	CAP	
50	50743731	1	CLAMP, HOSE	
51	52325180	4	BRACKET, SEPARATOR TANK MOUNTING	
52	52104767	4	PAD, ISOLATOR	
53	96726716	12	BOLT, FLANGED HD.	
54	95033593	1	PLUG	
55	51607430	1	SENDER,TEMP	
56	52198405	1	FITTING, HYD.	
57	52301041	1	SENSOR, TEMPERATURE FAN	
417	57137986	1	HOSE, AIR	

52320868 SEPARATOR TANK ASSEMBLY

57694788 SEPARATOR TANK ASSEMBLY (CE)



12 NOT SHOWN

57694788 SEPARATOR TANK ASSEMBLY (CE)

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57694713	1	TANK, SEPARATOR (CE)	
2	57569758	1	ELEMENT, SEPARATOR	
3	57391047	1	VALVE, MINIMUM PRESSURE	
4	95097291	1	NIPPLE, PIPE	
5	50023910	1	STEM, HOSE	
6	35596733	1	VALVE, SAFETY RELIEF	
7	52226164	1	NIPPLE, PIPE	
8	95323432	1	TEE	
9	52198397	1	FITTING, HYD.	
10	36865756	2	SWITCH, THERMAL	
11	95279469	1	FITTING, HYD.	
12	39476916	1	GLASS, SIGHT	
13	35579630	1	PLUG	
15	95431292	1	ELBOW	
16	95293403	1	ELBOW	
17	95303335	1	ELBOW	
20	96716337	4	CAPSCREW, HEX. HD.	
21	96702568	8	WASHER, FLAT	
22	96727136	4	NUT	
23	39871694	1	TUBE, SCAVANGE	
24	39417118	1	ADAPTER	
25	39322748	1	ADAPTER, ORIFICE	
26	95235370	2	EYE, LIFTING	
27	95242558	2	NIPPLE	
28	95378907	1	TEE	
29	95279527	1	ELBOW	
30	95330023	1	ADAPTER	
31	95922928	2	NUT, HEX.	
32	50947357	1	VALVE, BALL	
33	95242525	1	NIPPLE	
34	95364956	1	TEE	
35	95356721	1	ELBOW	
36	95279386	1	ELBOW	
37	95219739	1	ADAPTER	
38	36843720	1	VALVE, CHECK	
39	95225116	3	GASKET, COMPRESSOR DISCHARGE	
40	52323102	1	PIPE, SEPARATOR TANK INLET	
41	52323094	1	PIPE, AIR END OUTLET	
43	96702550	16	WASHER, FLAT	
44	96703962	8	CAPSCREW, HEX. HD.	

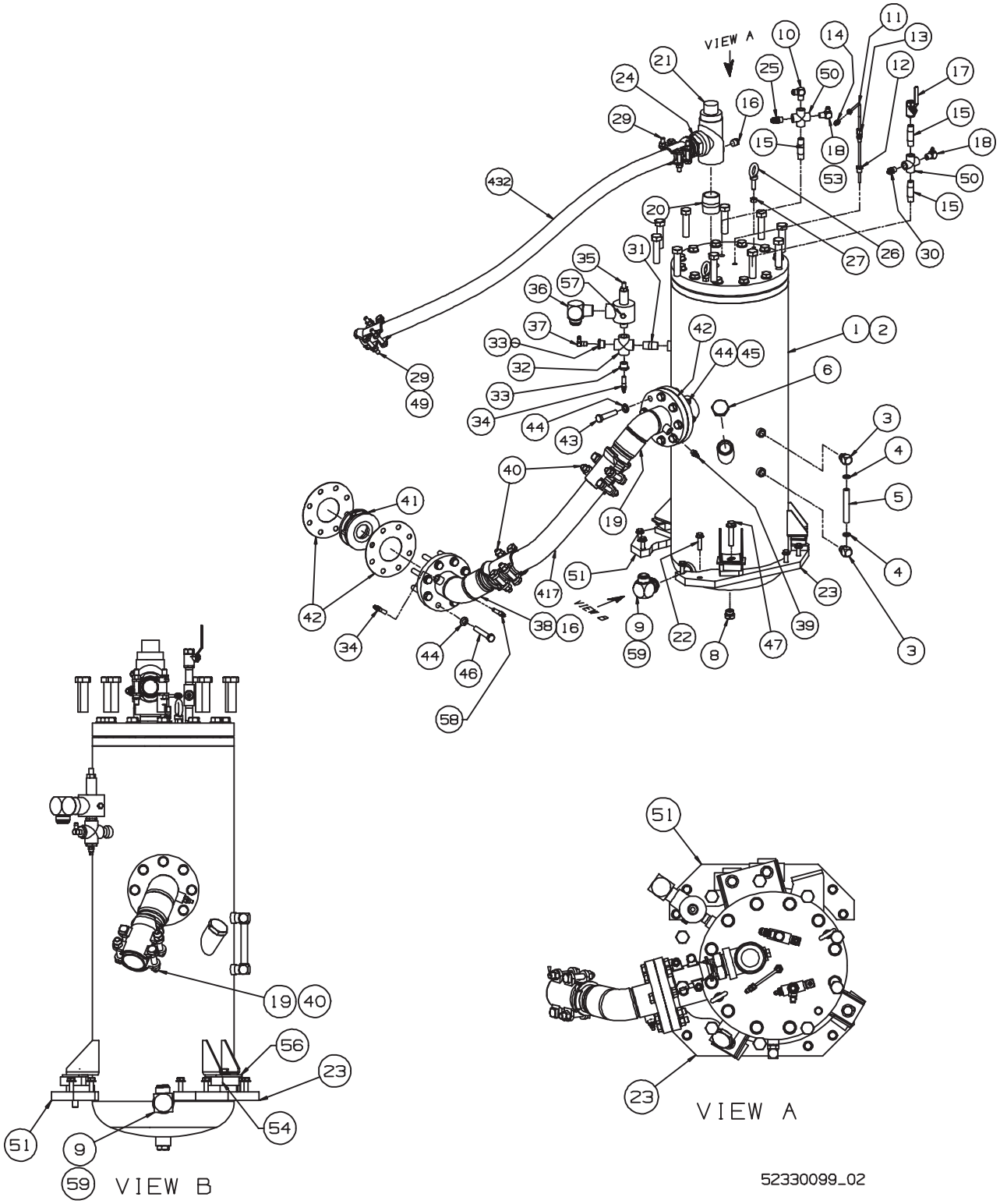
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57694788 SEPARATOR TANK ASSEMBLY (CE)

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
45	96705504	8	CAPSCREW, HEX. HD.	
47	57546061	2	CLAMP, HOSE	
49	95257341	1	HOSE, AIR	
50	50743731	1	CLAMP, HOSE	
51	52325180	4	BRACKET, SEPARATOR TANK MOUNTING	
52	52104767	4	PAD, ISOLATOR	
53	96726716	12	BOLT, FLANGED HD.	
54	95033593	1	PLUG	
55	51607430	1	SENDER, TEMP	
56	52198405	1	FITTING, HYD.	
57	52301041	1	SENSOR, TEMPERATURE FAN	
417	57137986	1	HOSE, AIR	

Ingersoll-Rand

52330099 TANK, SEPARATOR, DUAL CERT



52330099 TANK, SEPARATOR, DUAL CERT

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51782548	1	TANK, SEPARATOR	
2	35856376	1	ELEMENT, SEPARATOR	
3	35323955	2	FITTING,SIGHT TUBE	
4	35324649	2	GASKET,SIGHT TUBE	
5	92121532	1	TUBE	
6	35579630	1	PLUG,FILLER,OIL	
8	95280541	1	FITTING, HYD	
9	95371209	1	FITTING, HYD.	
10	95279535	1	ELBOW	
11	39871702	1	TUBE, SCAVENGE	
12	95056040	1	BUSHING	
13	39417118	1	FITTING	
14	39322748	1	ORAFICE	
15	95243051	3	NIPPLE PIPE	
16	95942819	2	PLUG, PIPE	
17	50947357	1	VALVE, BALL	
18	95279527	1	ELBOW	
19	52323102	1	PIPE, INLET ,SEPARATOR TANK	
20	95097291	1	NIPPLE, PIPE	
21	51728236	1	VALVE, MINIMUM PRESSURE	
22	96727185	9	BOLT	
23	52330123	1	ADAPTER,PLATE REAR	
24	50023910	1	STEM	
25	95219721	1	CONNECTOR	
26	95037255	2	BOLT, EYE	
27	95922902	2	NUT	
28	95313961	1	HOSE, AIR, BULK (56 IN.)	
29	50743731	1	CLAMP, HOSE	
30	95330023	1	ADAPTER	
31	95242525	1	NIPPLE.	
32	95364956	1	FITTING	
33	95037438	1	BUSHING, PIPE	
34	36865756	2	SWITCH, THERMAL	
35	35596733	1	VALVE, SAFETY RELIEF	
36	95279469	1	FITTING, HYD	
37	95335980	1	ELBOW, 90 DEG MALE	
38	52323094	1	PIPE, AIREND OUTLET	
39	51607430	1	SENDER,TEMP	

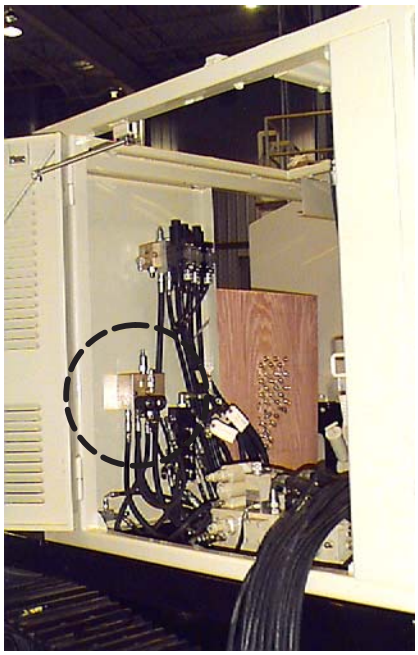
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52330099 TANK, SEPARATOR, DUAL CERT

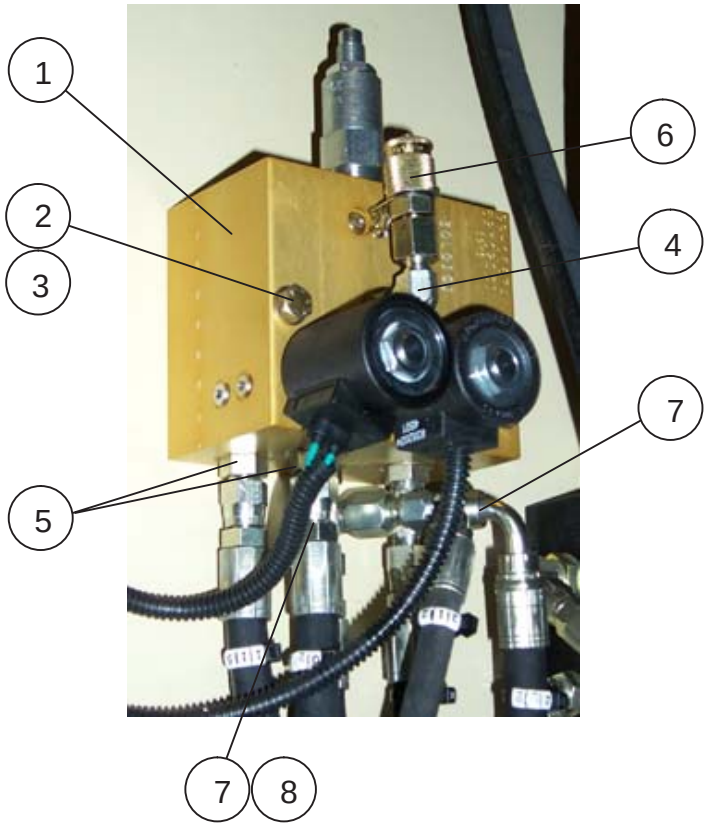
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
40	57546061	2	CLAMP, HOSE	
41	36843720	1	VALVE, CHECK	
42	95225116	3	GASKET RING	
43	96701511	8	BOLT	
44	96702550	8	WASHER	
45	96727151	8	NUT	
46	96705504	8	BOLT	
47	50970201	2	BOLT	
50	95378907	2	CROSS, FEMALE PIPE	
51	52330115	1	ADAPTER,PLATE FORWARD	
53	95257341	1	CAP	
54	50258276	4	CLEVIS	
56	52104767	4	PAD, ISOLATOR	
57	95033593	1	PLUG	
58	52301041	1	SENSOR, TEMPERATURE FAN	
417	57137986	1	HOSE, AIR	
432	95313961	1	HOSE, AIR	

52330099 TANK, SEPARATOR, DUAL CERT

52330644 DRILL/TRAM SELECTOR VALVE ASSEMBLY



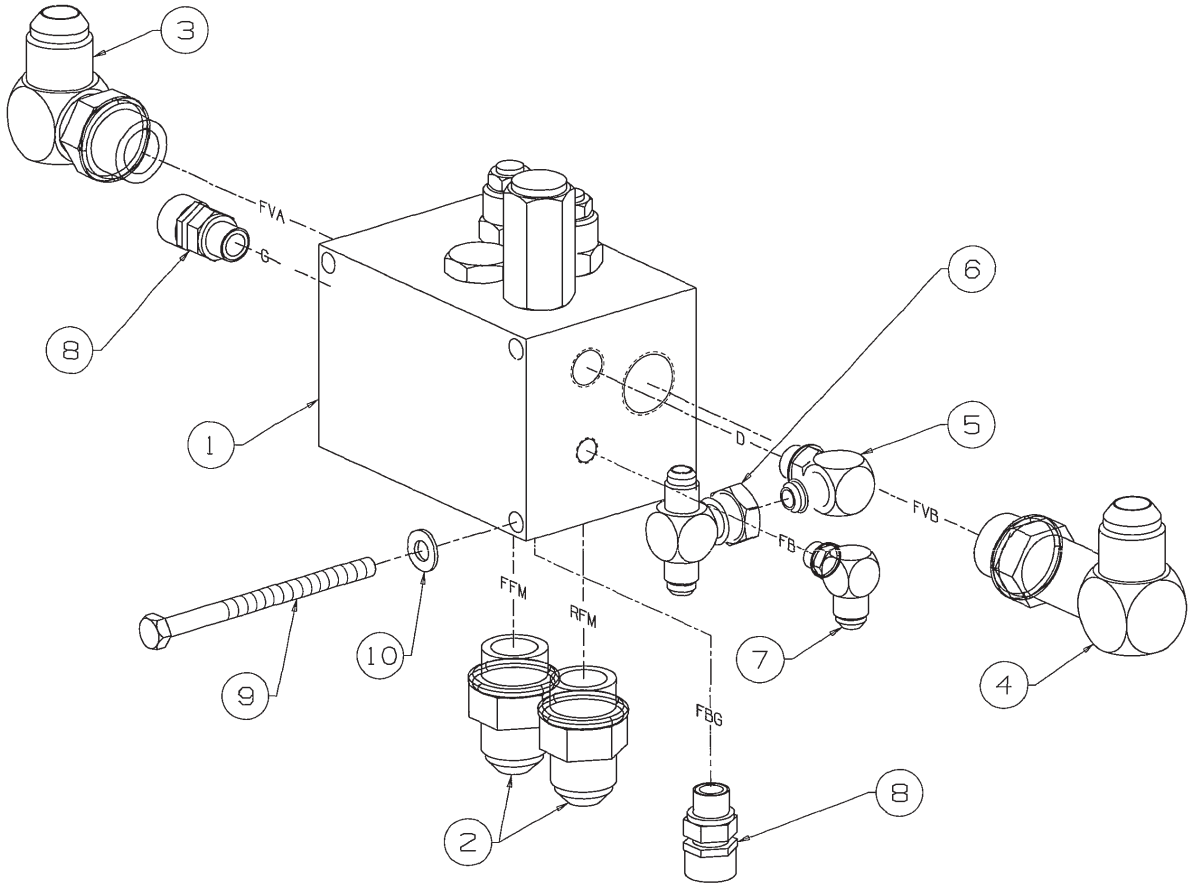
LOCATION



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52302031	1	VALVE, DRILL/TRAM SELECTOR *REFER TO PAGE 9.16–1*	
2	96713094	2	BOLT	
3	96702519	2	WASHER	
4	95365094	1	ADAPTER	
5	95365078	2	ADAPTER	
6	52306602	1	FITTING, PRESSURE TEST	
7	95453346	2	TEE	
8	56955867	1	ADAPTER	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

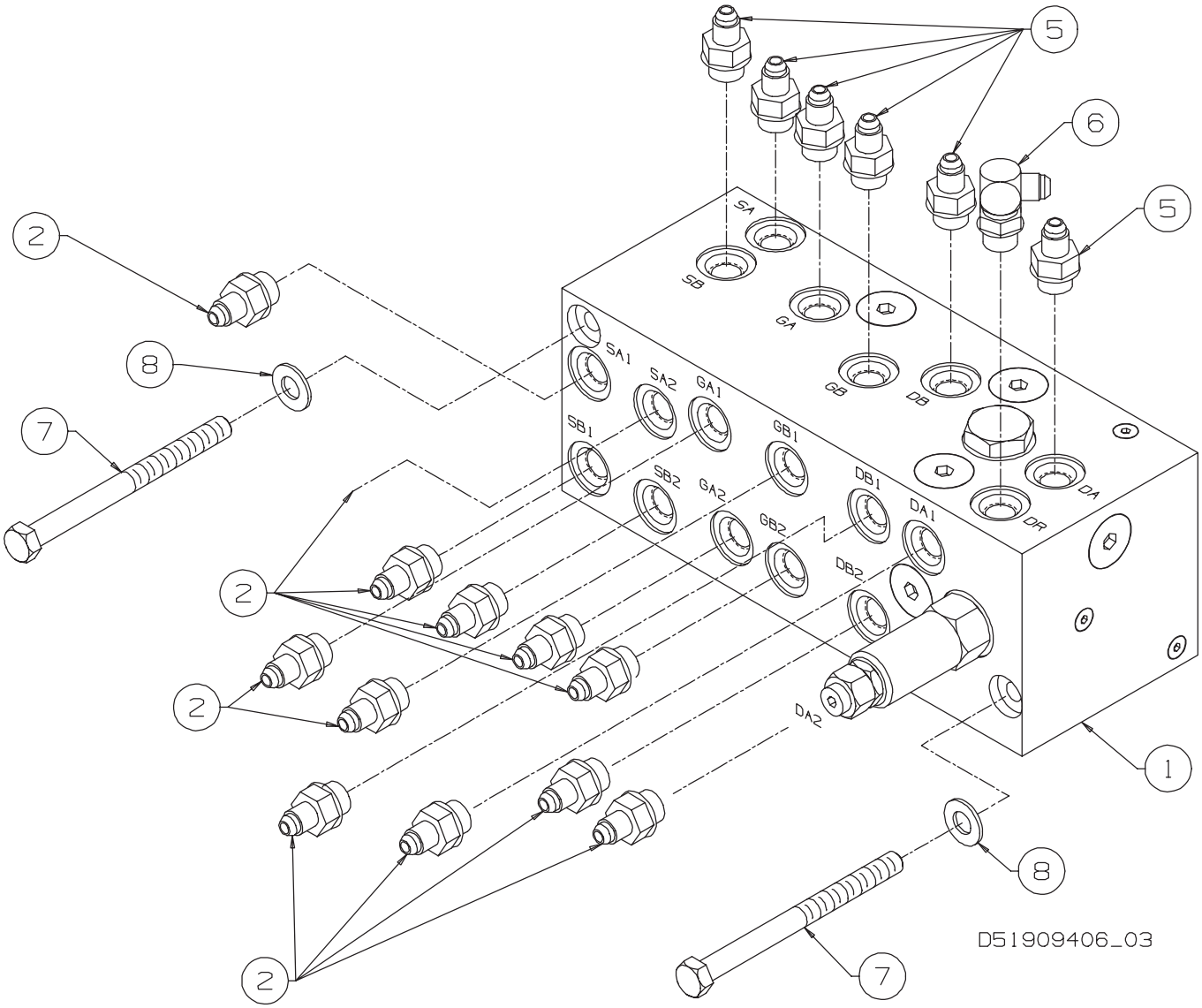
51909448 FEED CONTROL MANIFOLD ASSEMBLY



D51909448_02

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51608263	1	MANIFOLD, FEED MOTOR *REFER TO PAGE 9.10–1*	
2	95356960	2	ADAPTER	
3	95280186	1	ADAPTER	
4	95752465	1	ELBOW	
5	95329975	1	ELBOW	
6	95480117	1	TEE	
7	95653614	1	ELBOW	
8	51620664	2	FITTING, PRESSURE TEST	
9	96714696	3	BOLT	
10	96700828	3	WASHER	

51909406 ROD CHANGER MANIFOLD ASSEMBLY

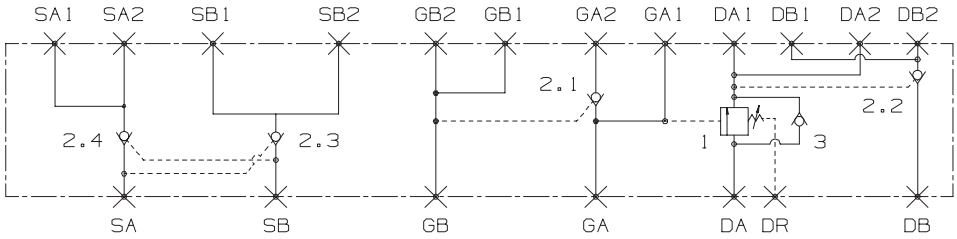


51909406 ROD CHANGER MANIFOLD ASSEMBLY

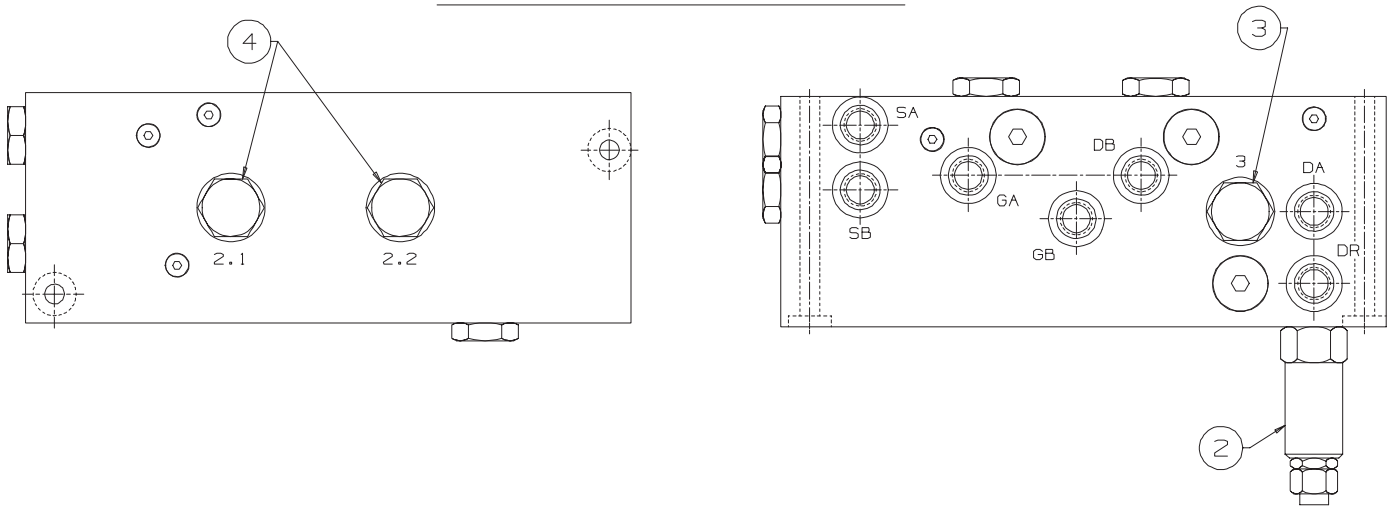
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51909125	1	MANIFOLD, ROD CHANGER	
2	95371258	12	ADAPTER	
5	95365078	6	ADAPTER	
6	95365094	1	ADAPTER	
7	96714696	2	CAPSCREW	
8	96700828	2	WASHER	

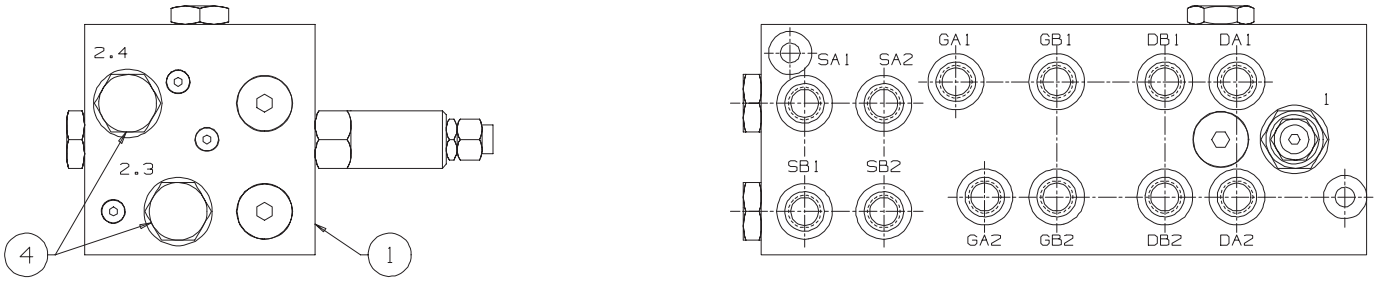
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

51909125 ROD CHANGER MANIFOLD



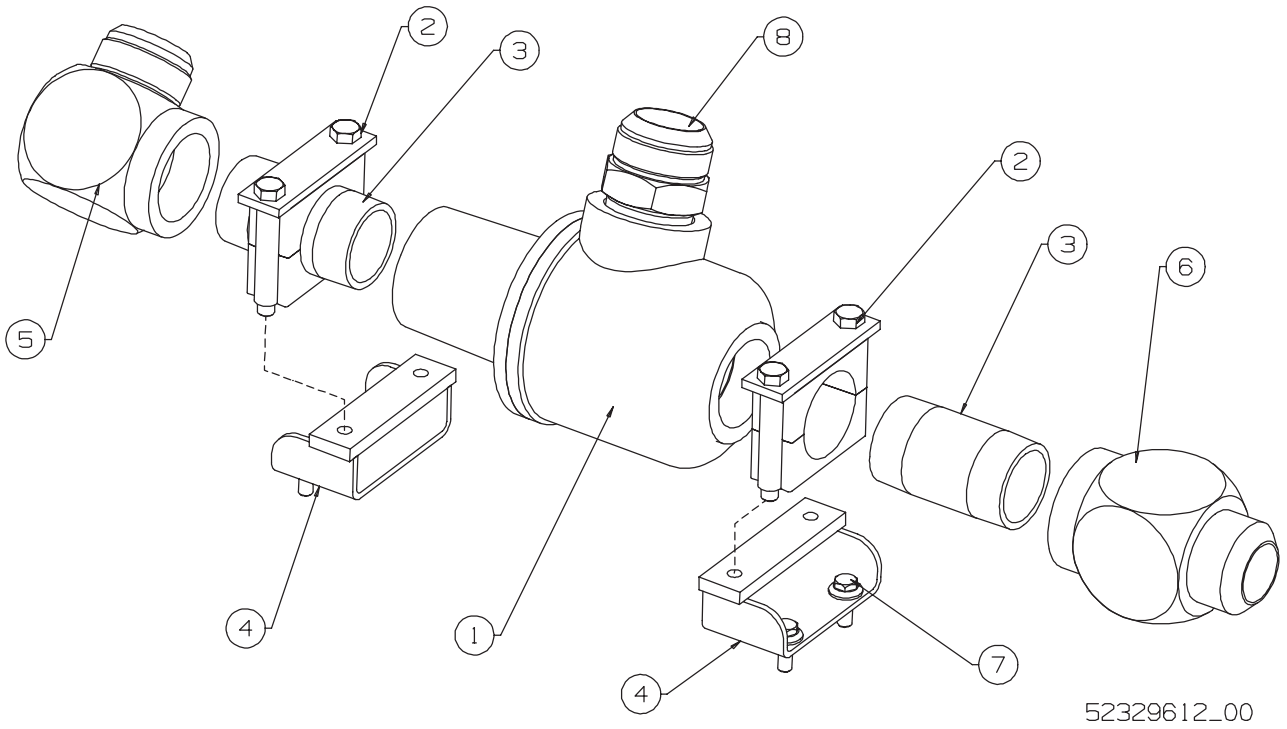
HYDRAULIC SCHEMATIC





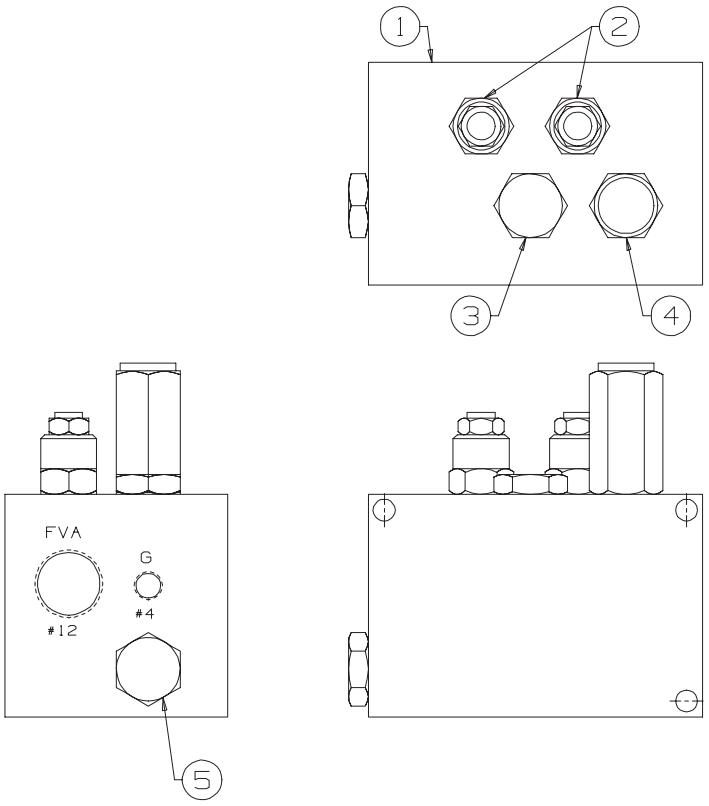
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51910990	1	BLOCK, MANIFOLD	
2	51782613	1	CARTRIDGE, SEQUENCE	
3	51785871	1	CARTRIDGE, CHECK	
4	51782605	4	CARTRIDGE, PILOT CHECK	

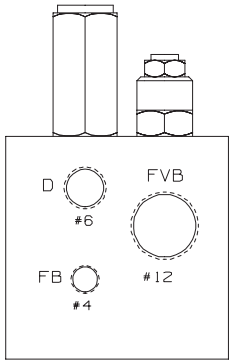
52329612 HYDRAULIC OIL THERMAL VALVE ASSEMBLY

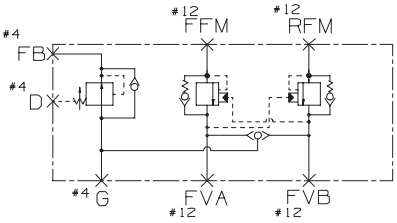


REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52301629	1	VALVE, HYDRAULIC THERMOSTATIC (NOM. 120 DEGREE) *REFER TO PAGE 9.49–1*	
2	52319332	2	CLAMP, PIPE	
3	95243093	1	NIPPLE, PIPE	
4	52321411	2	BRACKET, MOUNTING	
5	95316915	1	ADAPTER	
6	95372223	1	ADAPTER	
7	96726914	4	CAPSCREW	
8	95279352	1	ADAPTER	

51608263 FEED MOTOR MANIFOLD





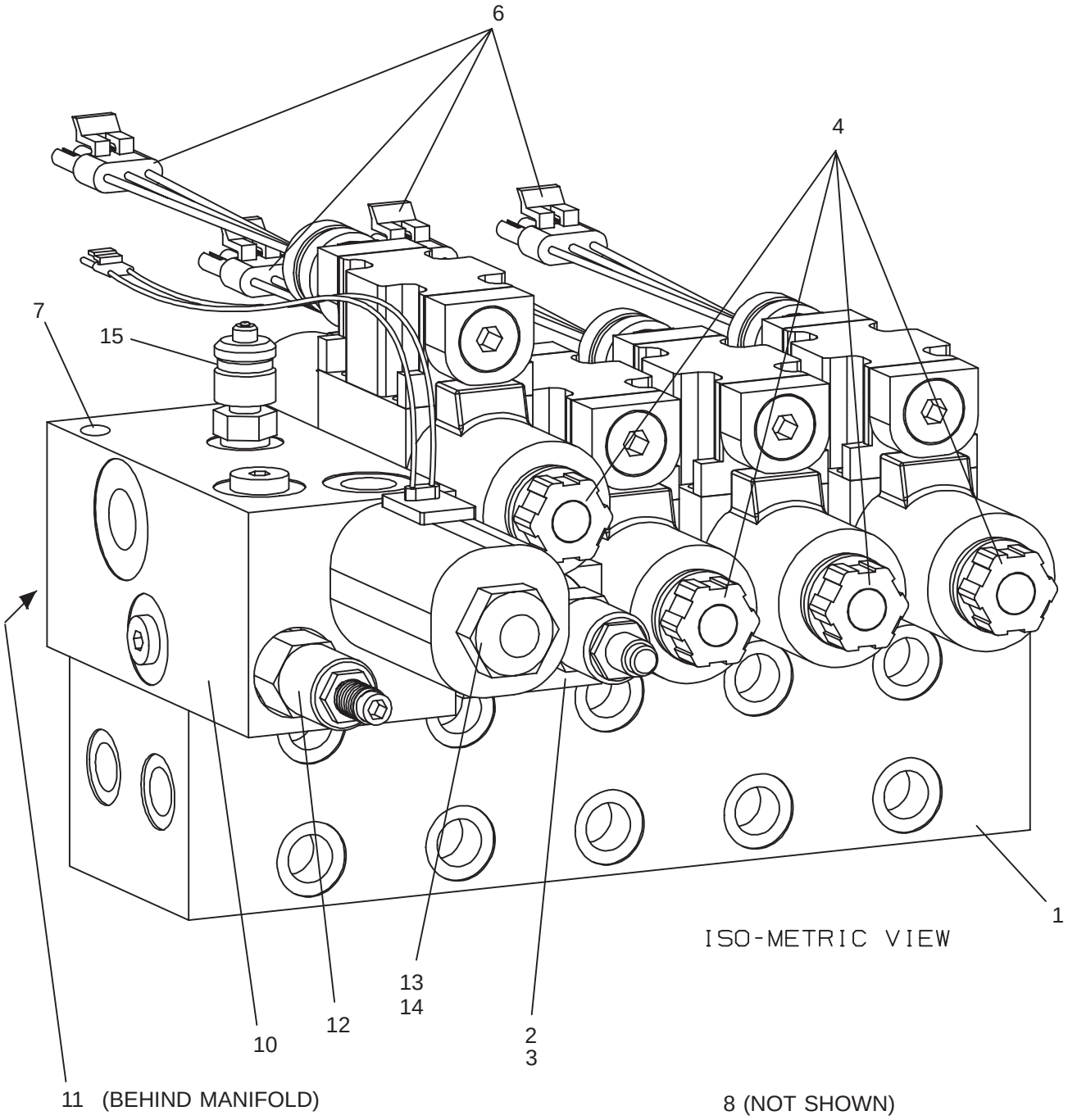


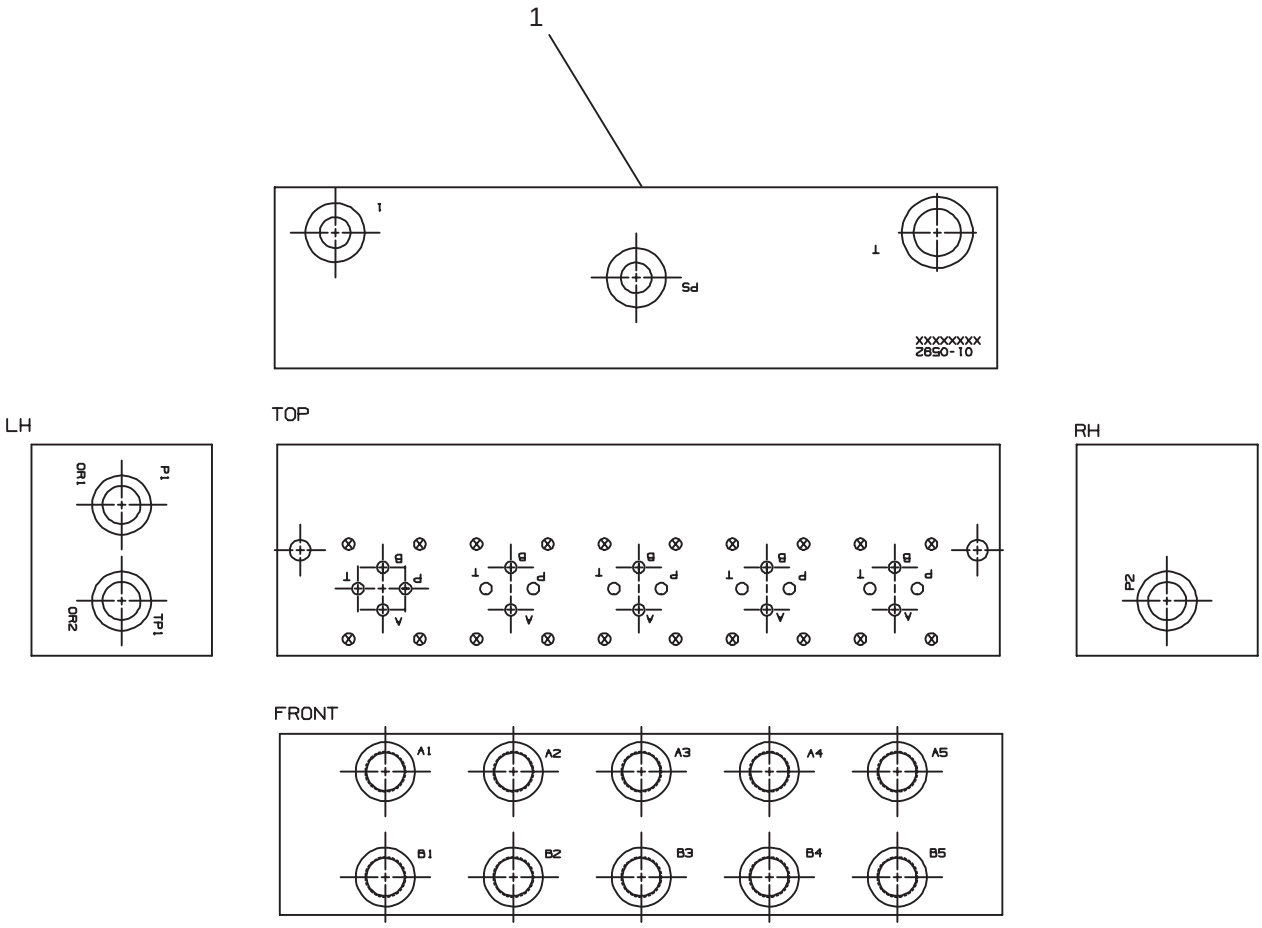
HYDRAULIC SCHEMATIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51776599	1	BLOCK, MANIFOLD	
2	51776607	2	VALVE, CARTRIDGE	
	51776607		.KIT, SEAL	
3	51729846	1	VALVE, SHUTTLE	
4	51984367	1	VALVE, CARTRIDGE	
	51776581		.KIT, SEAL	
5	51785871	1	CARTRIDGE, CHECK VALVE	
	51776458	1	.KIT, SEAL	

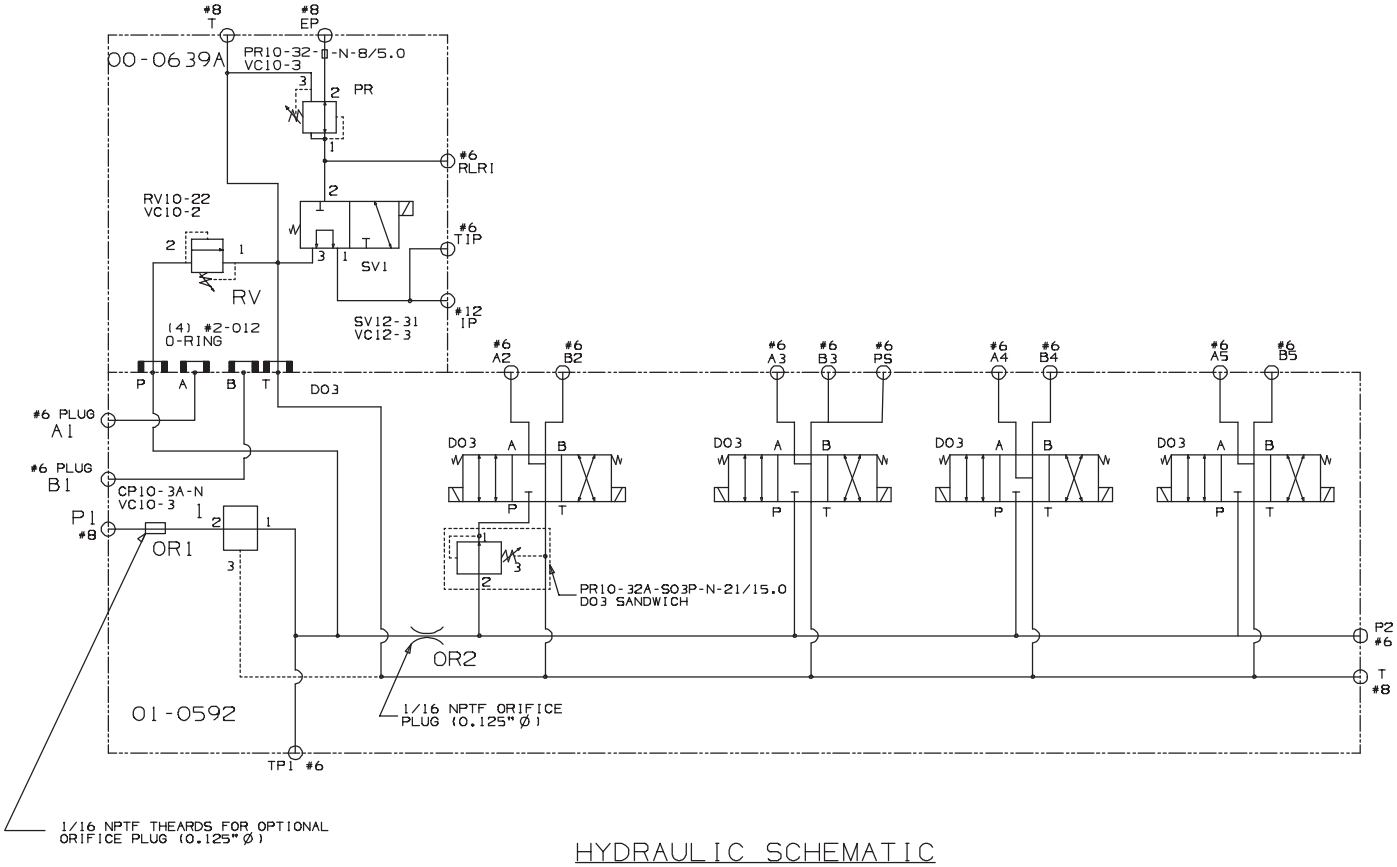
Ingersoll-Rand

52324993 AUXILIARY CONTROL VALVE




1
1
PS
T
XXXXXXXX
2850-10
LH
OR1
P1
OR2
TP1
TOP
B
P
T
A
RH
P2
FRONT
A1
A2
A3
A4
A5
B1
B2
B3
B4
B5

52324993 AUXILIARY CONTROL VALVE



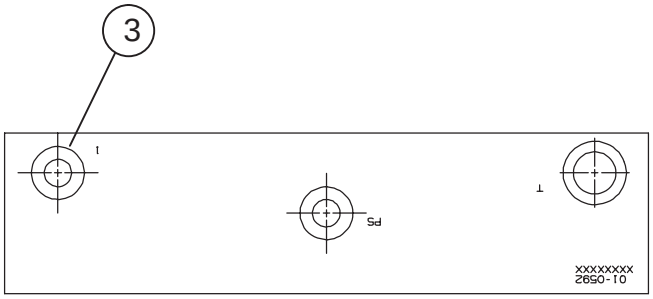
HYDRAULIC SCHEMATIC

52324993 AUXILIARY CONTROL VALVE

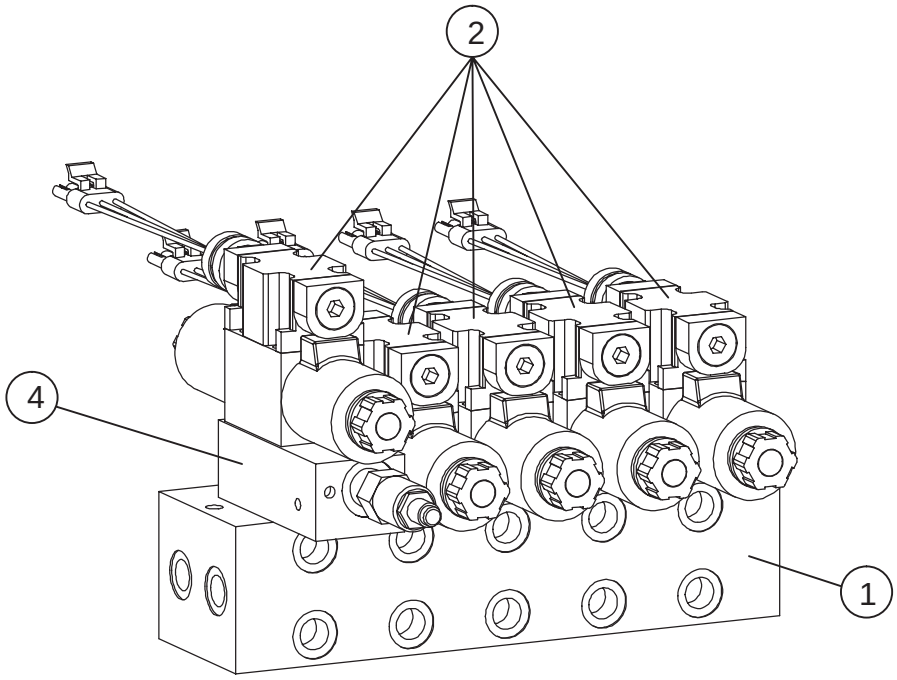
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52326261	1	BLOCK, MANIFOLD	
2	52308962	1	PLUG, ORIFICE	
3	52326287	1	ASSEMBLY, PRESSURE REDUCING VALVE	
	52326303	1	.CARTRIDGE, PRESSURE REDUCING VALVE	
	52326295	1	..KIT, SEAL	
4	51863025	4	VALVE, HYDRAULIC	
	51863017	4	.KIT, SEAL	
	51863009	4	.COIL, SOLENOID	
6	52306933	4	HARNESS, SOLENOID COIL WIRING	
7	95976270	4	CAPSCREW	
8	52326279	1	PLUG, FLOW THROUGH	
	95017984	4	O–RING (INSTALLED BETWEEN THE MANIFOLD & UNLOADER BLOCKS)	
10	52318995	1	BODY, MANIFOLD	
11	52319001	1	VALVE, CARTRIDGE	
	52321270	1	.KIT, SEAL	
12	52319019	1	CARTRIDGE, PRESSURE REDUCING	
	51919397	1	.KIT, SEAL	
13	52330842	1	VALVE, SOLENOID	
14	52319035	1	COIL	
15	52306602	1	FITTING, HYDRAULIC TEST	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52324985 ROD CHANGER VALVE



REAR

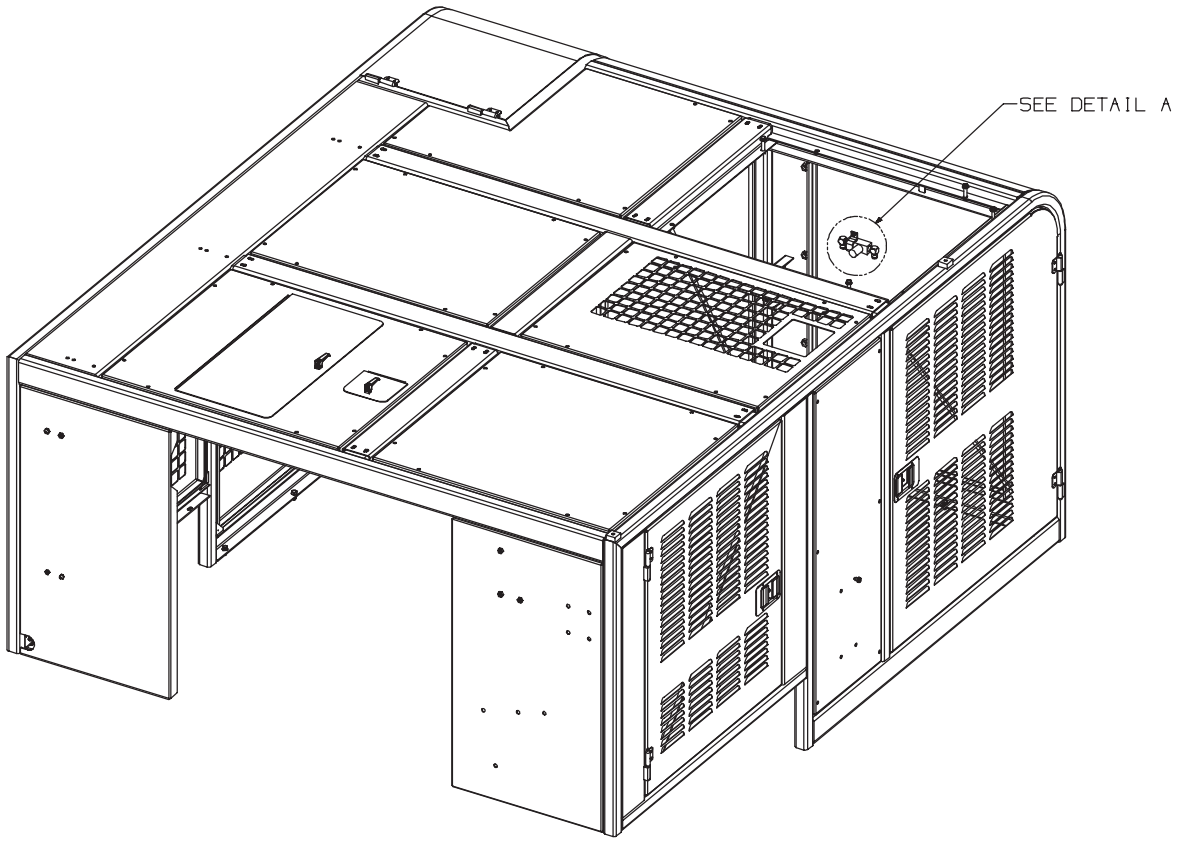


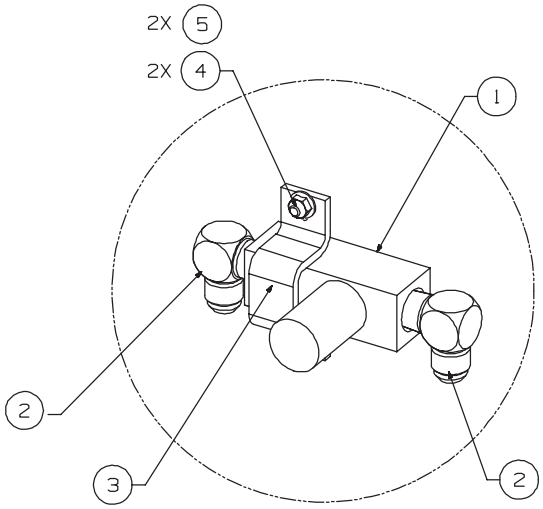
52324985 ROD CHANGER VALVE

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52326261	1	BLOCK, MANIFOLD	
2	51863025	5	VALVE, HYDRAULIC	
	51863017	5	.KIT, SEAL	
	51863009	5	.COIL, SOLENOID	
	52306933	4	.HARNESS, SOLENOID COIL WIRING	
3	52326303	1	CARTRIDGE, PRESSURE REDUCING	
	52326295	1	.KIT, SEAL	
4	52326386	1	VALVE, PRESSURE REDUCING	
	52326394	1	.CARTRIDGE	
	52326402	1	.KIT, SEAL	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57738304 DUST COLLECTOR MOTOR BYPASS VALVE ASSEMBLY





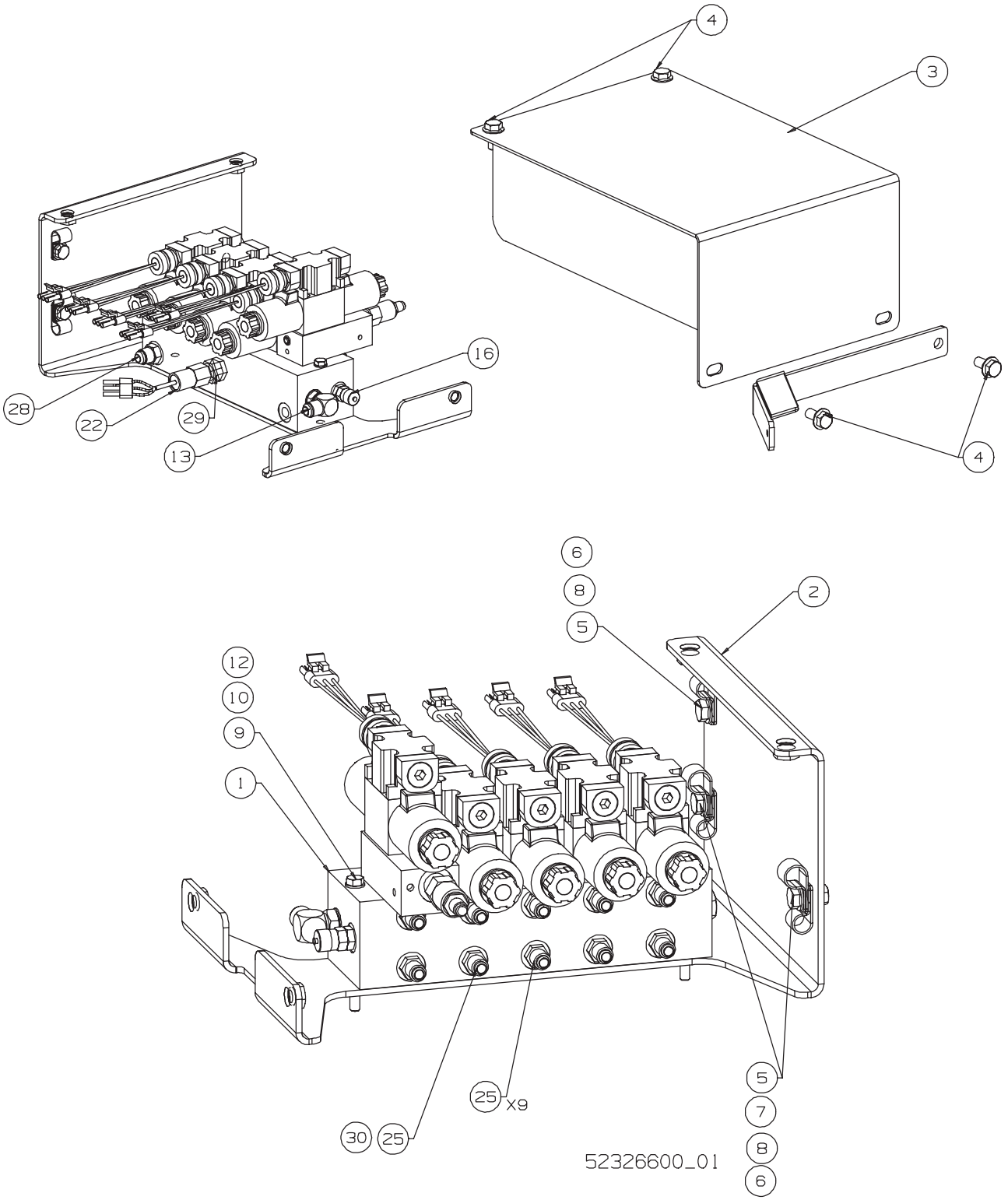
DETAIL A

57738304_00

57738304 DUST COLLECTOR MOTOR BYPASS VALVE ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57738296	1	VALVE, FLOW CONTROL	
2	95279535	2	ELBOW	
3	57737116	1	BRACKET	
4	96742689	2	BOLT, HEX FLANGE	
5	96726781	2	NUT	

52326600 ROD CHANGER VALVE ASSEMBLY

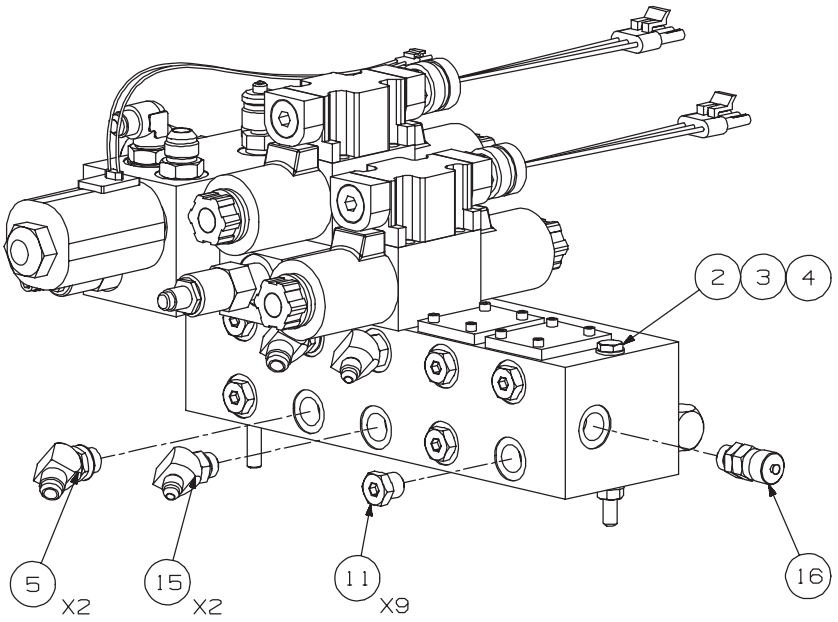


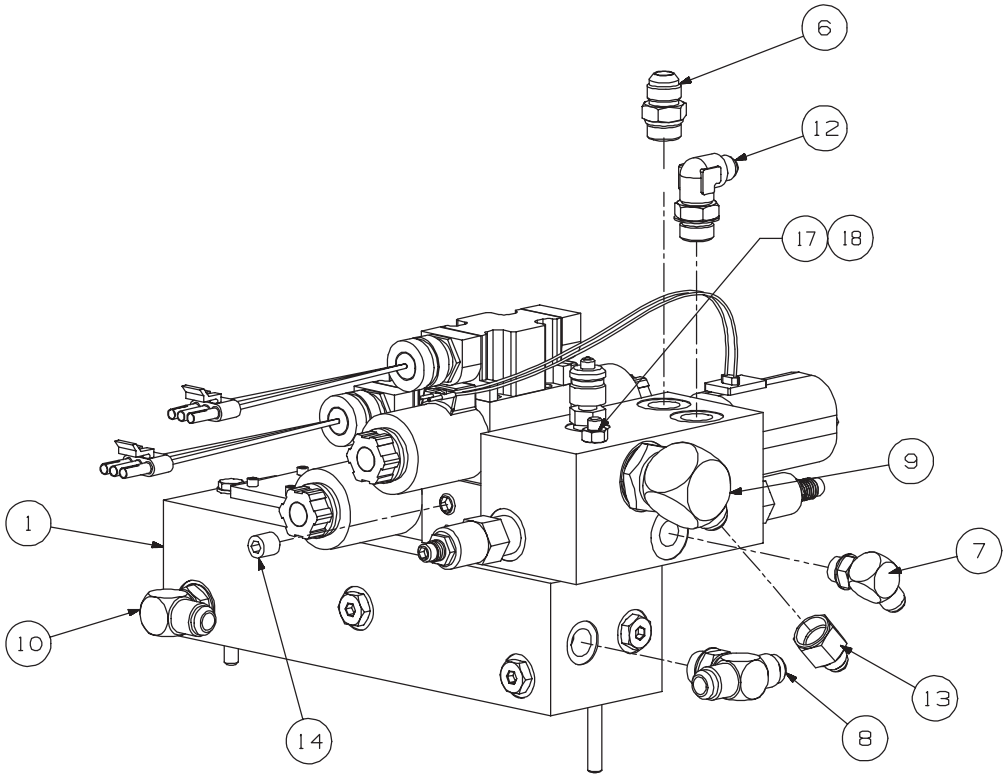
52326600 ROD CHANGER VALVE ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52324985	1	VALVE, ROD CHANGER *REFER TO PAGE 9.12–1*	
2	52116415	1	BASEPLATE, ROD CHANGER VALVE	
3	52325172	1	COVER, ROD CHANGER VALVE	
4	96727250	4	BOLT, FLANGED HD.	
5	96726914	3	BOLT, FLANGED HD.	
6	96726807	3	LOCKNUT, FLANGED HD.	
7	95301842	2	CLAMP, VINYL	
8	95310231	3	CLAMP, VINYL	
9	96714696	2	BOLT, HEX. HD.	
10	96702519	2	LOCKNUT, FLANGED HD.	
12	96726799	2	NUT, HEX.	
13	95303335	1	ADAPTER	
16	51620664	1	FITTING, HYDRAULIC TEST	
22	51910867	1	SWITCH, PRESSURE	
25	95365078	10	ADAPTER	
26	96727193	1	BOLT	
27	96726799	1	NUT	
28	95303368	1	CONNECTOR	
29	95655064	1	ADAPTER	
30	51908804	1	ADAPTER, RESTRICTOR	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52329935 AUXILIARY CONTROL VALVE





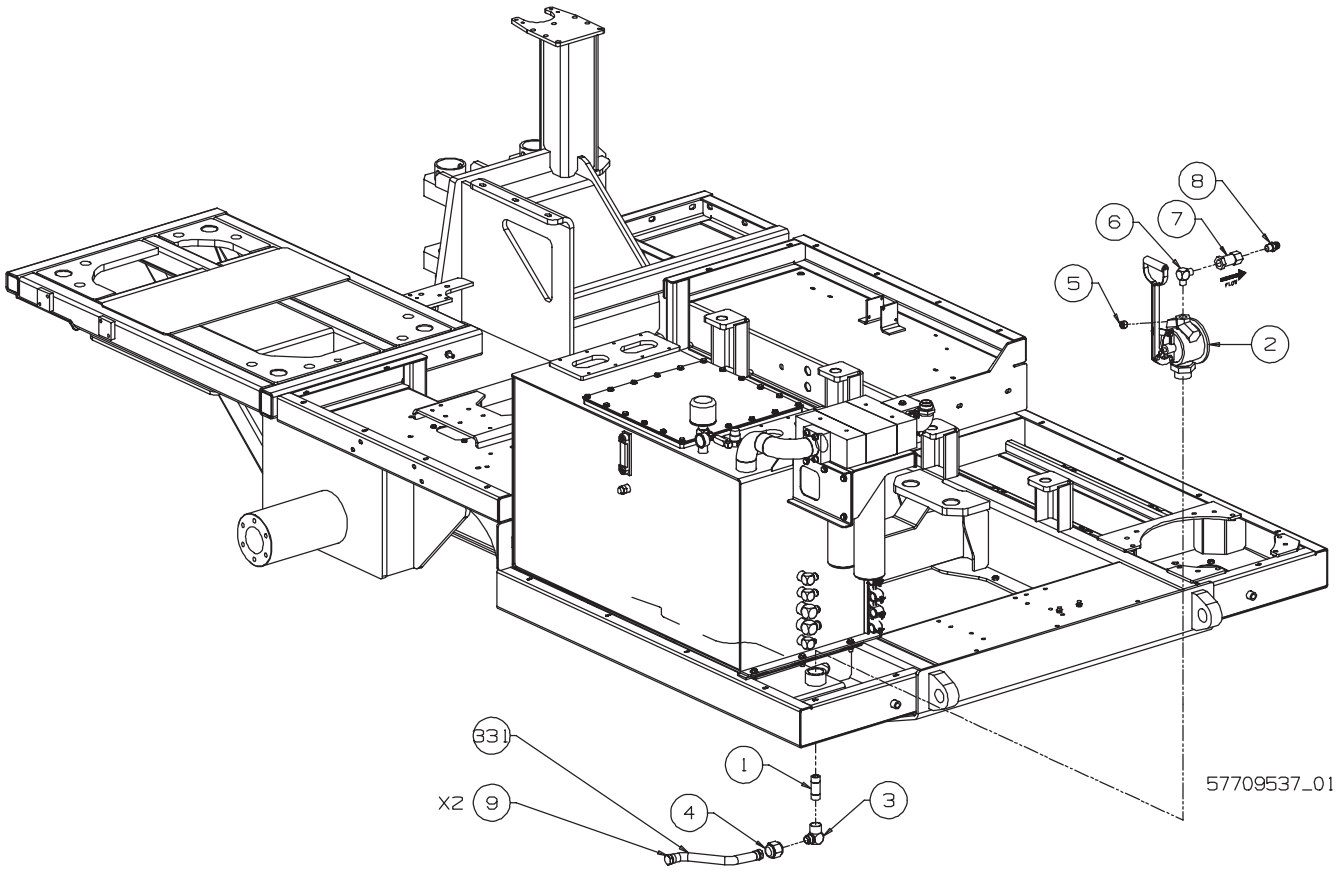
C52329935_00

52329935 AUXILIARY CONTROL VALVE

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52324993	1	VALVE CONTROL, AUXILIARY *REFER TO PAGE 9.11–1*	
2	96726435	2	BOLT,HEX HD	
3	96702519	4	WASHER	
4	96726799	2	NUT	
5	95363339	8	ADAPTER	
6	95303368	1	CONNECTOR	
7	95329975	2	ELBOW	
8	52151420	1	ADAPTER	
9	95330692	1	ELBOW	
10	95303335	1	ELBOW	
11	95666996	9	PLUG	
12	95356853	1	ADAPTER, 90 DEGREE	
13	56919004	1	FITTING	
14	95250932	1	PLUG	
15	50700814	2	ADAPTER	
16	51620664	1	FITTING, PRESSURE TEST	
17	96702840	1	NUT	
18	52319217	1	ROD, THREADED	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57709537 PUMP ASM, HYD HAND

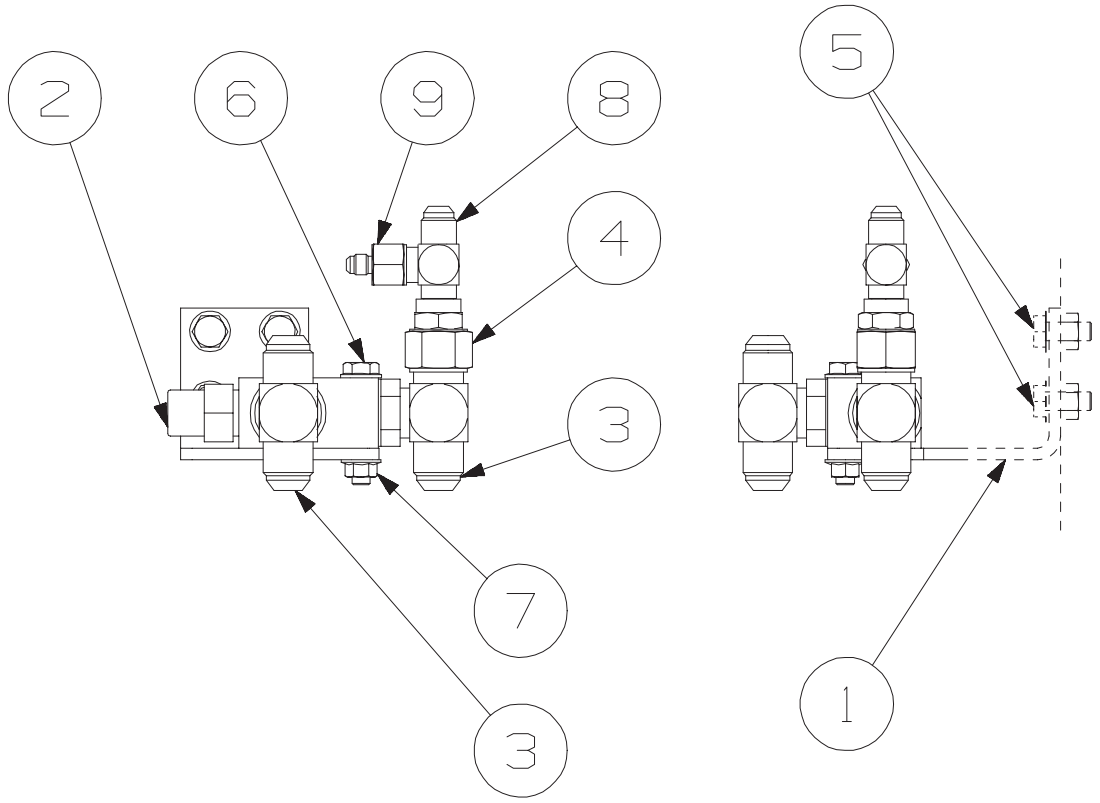


57709537 PUMP ASM, HYD HAND

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	95344321	1	NIPPLE	
2	51916526	1	PUMP, HAND	
3	95279238	1	FITTING HYD	
4	95387924	1	CAP	
5	95267191	1	PLUG, PIPE	
6	95317434	1	FITTING	
7	50805118	1	VALVE, CHECK	
8	95219747	1	CONNECTOR	
9	95422838	2	PLUG	
331	50978543	1	HOSE ASSY	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57690026 VALVE ASM, PILOT RELIEF



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57689234	1	BRACKET, VALVE MOUNTING	
2	57698896	1	VALVE, PILOT OP RELIEF	
3	95469169	2	FITTING, TUBE	
4	56956220	1	FITTING, HYD	
5	96727003	4	BOLT	
6	96727904	1	BOLT	
7	96726807	1	NUT, FLANGED HEAD	
8	95416731	1	NUT, SWIVEL TEE	
9	56999246	1	FITTING, HYD	

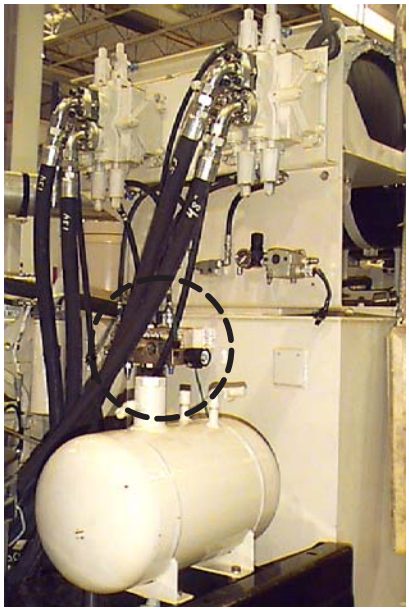
52329943 MODE CONTROL VALVE ASSY

There is no drawing available at this time

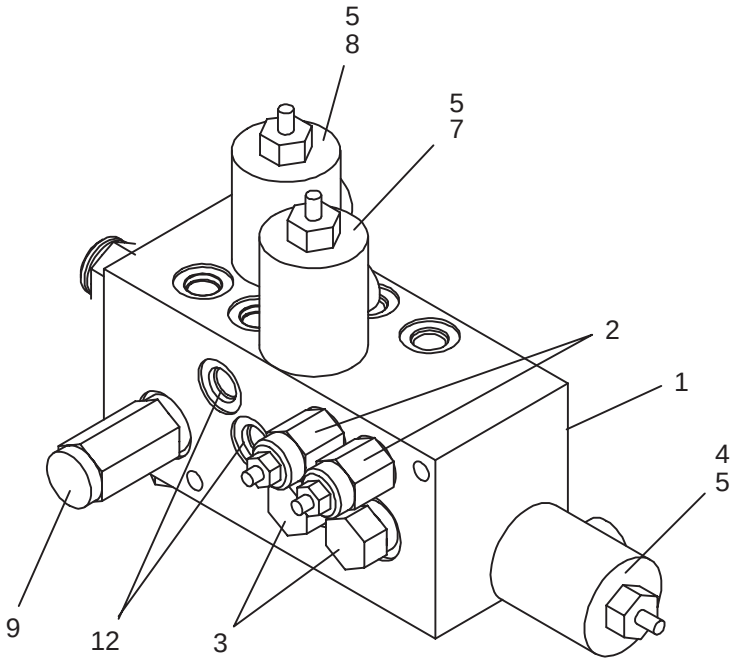
52329943 MODE CONTROL VALVE ASSY

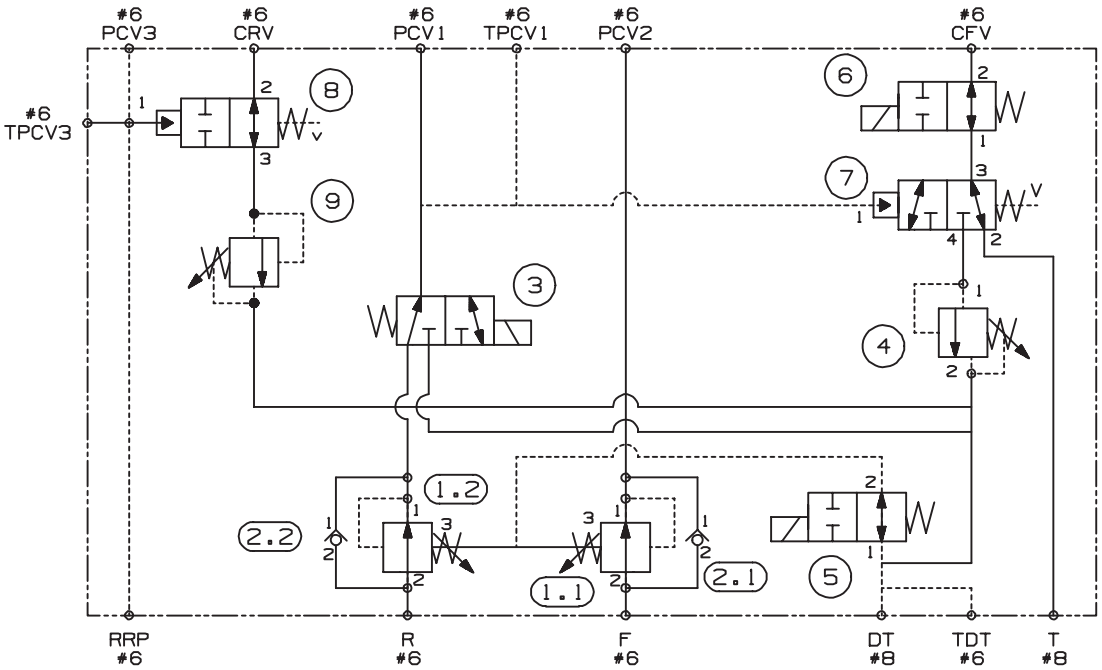
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	95371258	8	FITTING, HYD	
2	95365078	1	CONNECTOR, STRT THRD	
3	95419594	1	CONNECTOR, STRT THRD	
4	95653317	1	PLUG, HEX HEAD	
5	96714712	2	CAPSCREW	
6	96702519	2	WASHER	
7	52314531	1	VALVE, DRILL MODE	
8	95473443	1	FITTING, HYD	
9	51620664	2	FITTING, PRESSURE TEST	
11	51716017	1	SWITCH, PRESSURE	
12	95838231	2	FITTING, TUBE	

52314531 MODE CONTROL VALVE

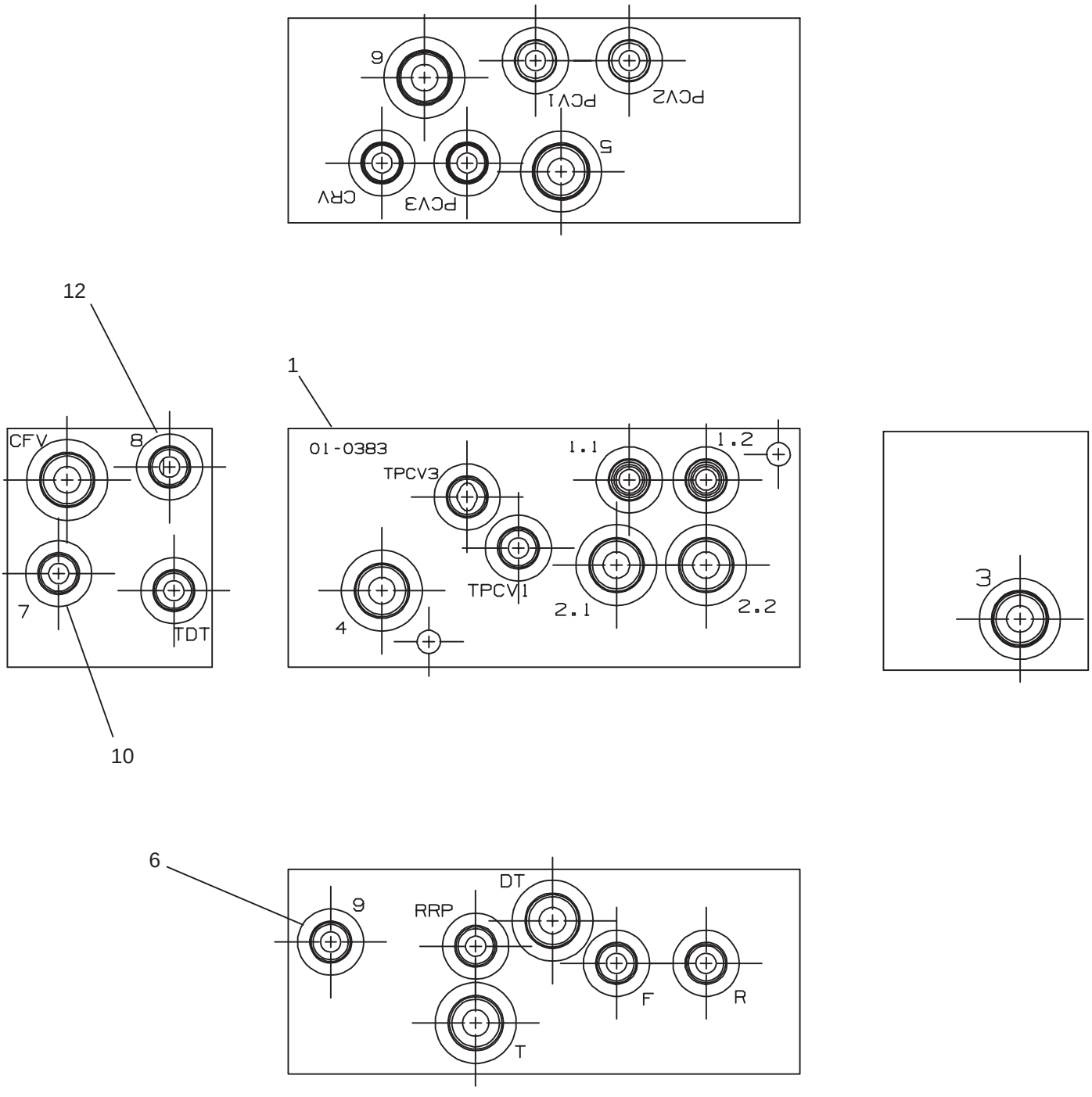


LOCATION





52314531 MODE CONTROL VALVE



WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52314531 MODE CONTROL VALVE

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52326451	1	BLOCK, MANIFOLD	
2	52326469	2	VALVE, PILOT OPERATED REDUCING/RELIEVING	
3	51874444	2	VALVE, CHECK	
4	52309358	1	CARTRIDGE, VALVE	
	51919397	1	.KIT, SEAL	
5	51785889	4	COIL	
6	52104395	1	CARTRIDGE, VALVE	
7	52326477	1	CARTRIDGE, VALVE	
	51919397	1	.KIT, SEAL	
8	52326485	1	CARTRIDGE, VALVE	
	52326535	1	.KIT, SEAL	
9	52326501	1	CARTRIDGE, VALVE	
	52326543	1	.KIT, SEAL	
10	57717381	1	CARTRIDGE, VALVE	
	51919397	1	.KIT, SEAL	
11	52326527	1	CARTRIDGE, VALVE	
	51919397	1	.KIT, SEAL	
12	52306602	3	FITTING, HYDRAULIC TEST	

52329885 MANIFOLD, HYD. RETURN

There is no drawing available at this time

52329885 MANIFOLD, HYD. RETURN

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52319233	1	MANIFOLD,HYD RETURN	
2	51914299	1	KIT, SPLIT FLANGE	
3	95366019	2	FITTING, HYD	
4	95330692	2	ELBOW	
5	95754867	3	FITTING, HYD	
6	95365086	1	CONNECTOR, STRT THRD	
7	95480109	2	FITTING, HYD	
8	95033619	1	PLUG, PIPE	
9	95469151	2	ADAPTER	
10	51618510	1	SWITCH, TEMPERATURE	
11	51618346	1	SENDER, TEMPERATURE	
12	95280160	2	FITTING, HYD	
13	95280152	1	ADAPTER	
14	95266417	1	O–RING	
15	96713128	4	BOLT	
16	96702519	4	WASHER, FLAT	
17	95280186	1	ELBOW	
18	52319373	1	SENSOR,PRESSURE	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52329851 VALVE BANK ASSY

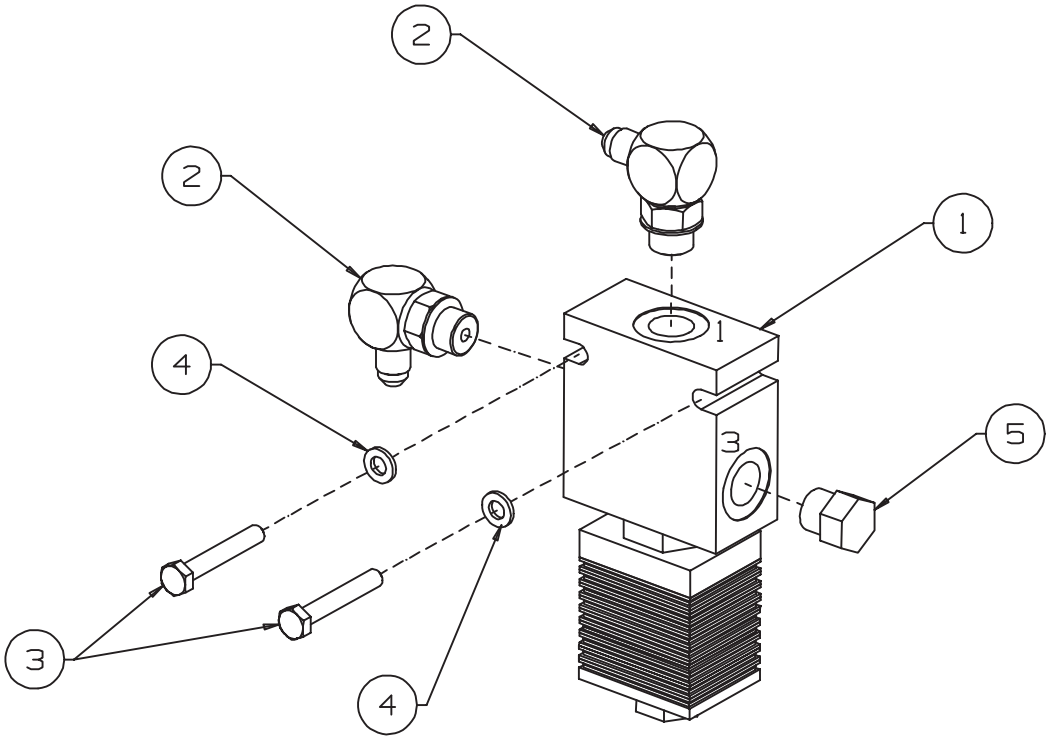
There is no drawing available at this time

52329851 VALVE BANK ASSY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52322625	1	BRACKET, MOUNTING	
2	52329836	1	VALVE ASM, LH TRAM/FEED *REFER TO PAGE 9.29–1*	
3	52329844	1	VALVE ASM, RH TRAM/ROT *REFER TO PAGE 9.30–1*	
4	96727169	8	BOLT	
5	96726708	8	BOLT	
6	96726807	8	NUT	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

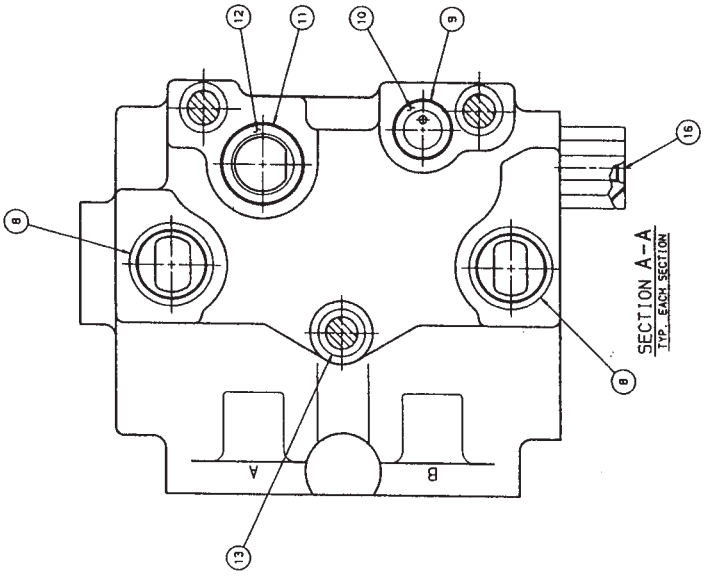
52329919 VALVE ASSY, ROTATION SOL

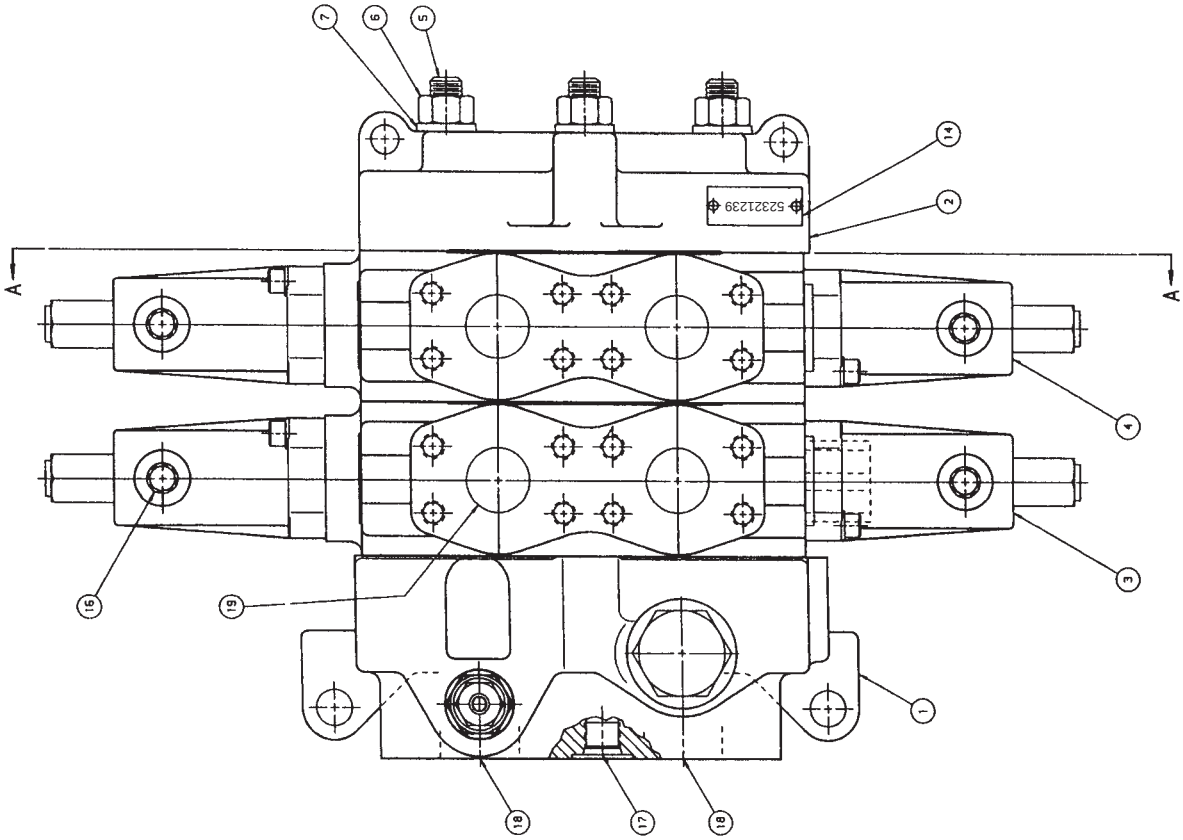


52329919 VALVE ASSY, ROTATION SOL.

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52324910	1	VALVE,SOLENOID	
2	95365094	2	ELBOW	
3	96703939	2	CAPSCREW	
4	96701289	2	WASHER	
5	95666996	1	PLUG	

52321239 FEED/TRAM VALVE



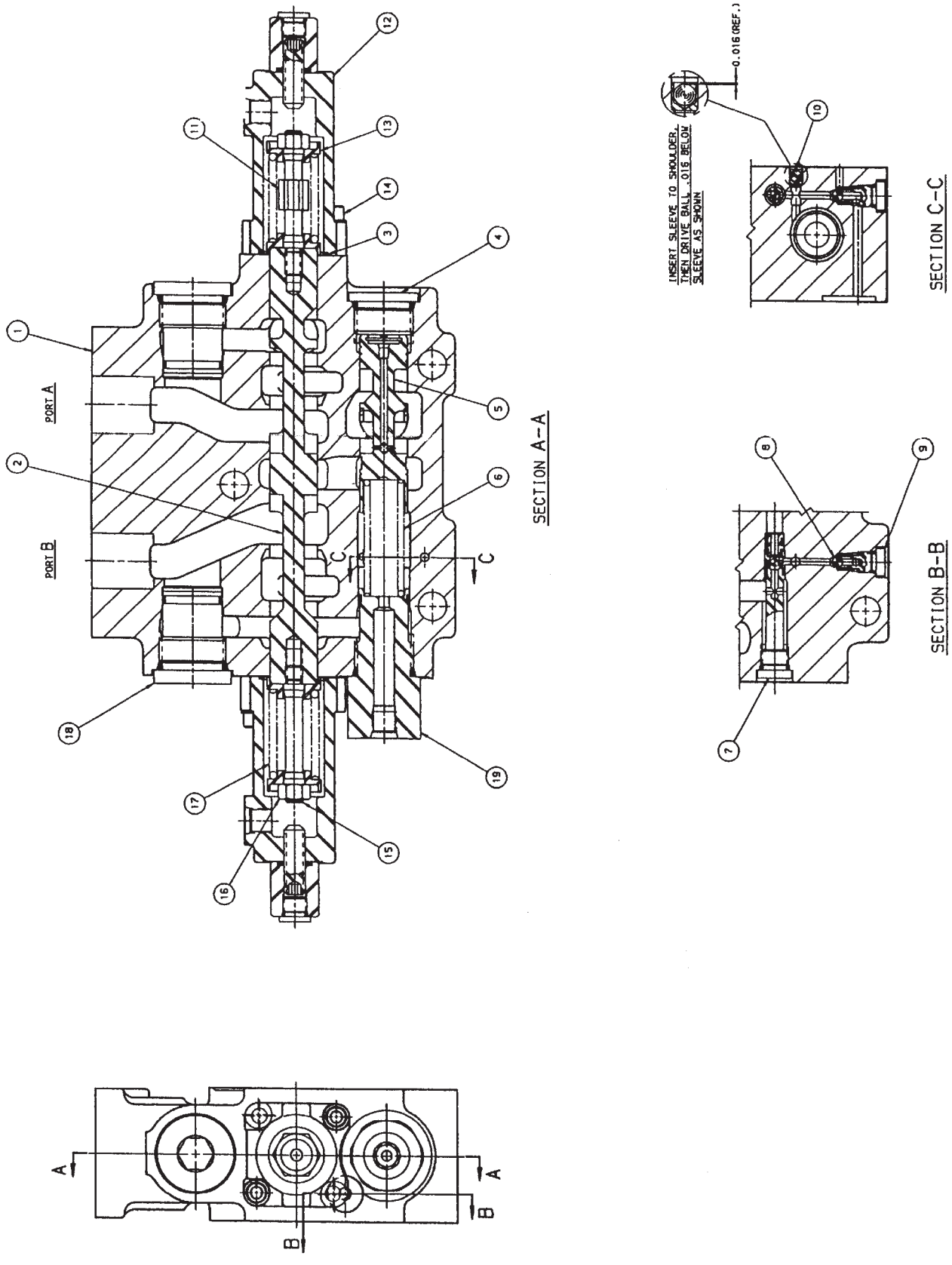


52321239 FEED/TRAM VALVE

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52326311	1	ASSEMBLY, INLET BODY SECTION	
2	52107927	1	COVER, END	
3	52326378	1	ASSEMBLY, MOTOR BODY SECTION *REFER TO PAGE 9.26–3*	
4	52326337	1	ASSEMBLY, MOTOR BODY SECTION *REFER TO PAGE 9.26–5*	
5	52326345	3	STUD	
6	52326352	3	NUT, HEX.	
7	52320678	3	WASHER	
8	52320694	6	O–RING	
9	52107968	3	RING, BACKUP	
10	52320702	3	O–RING	
11	52107984	3	RING, BACKUP	
12	51719664	3	O–RING	
13	51050326	9	SHIM	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52326378 MOTOR BODY SECTION ASSEMBLY

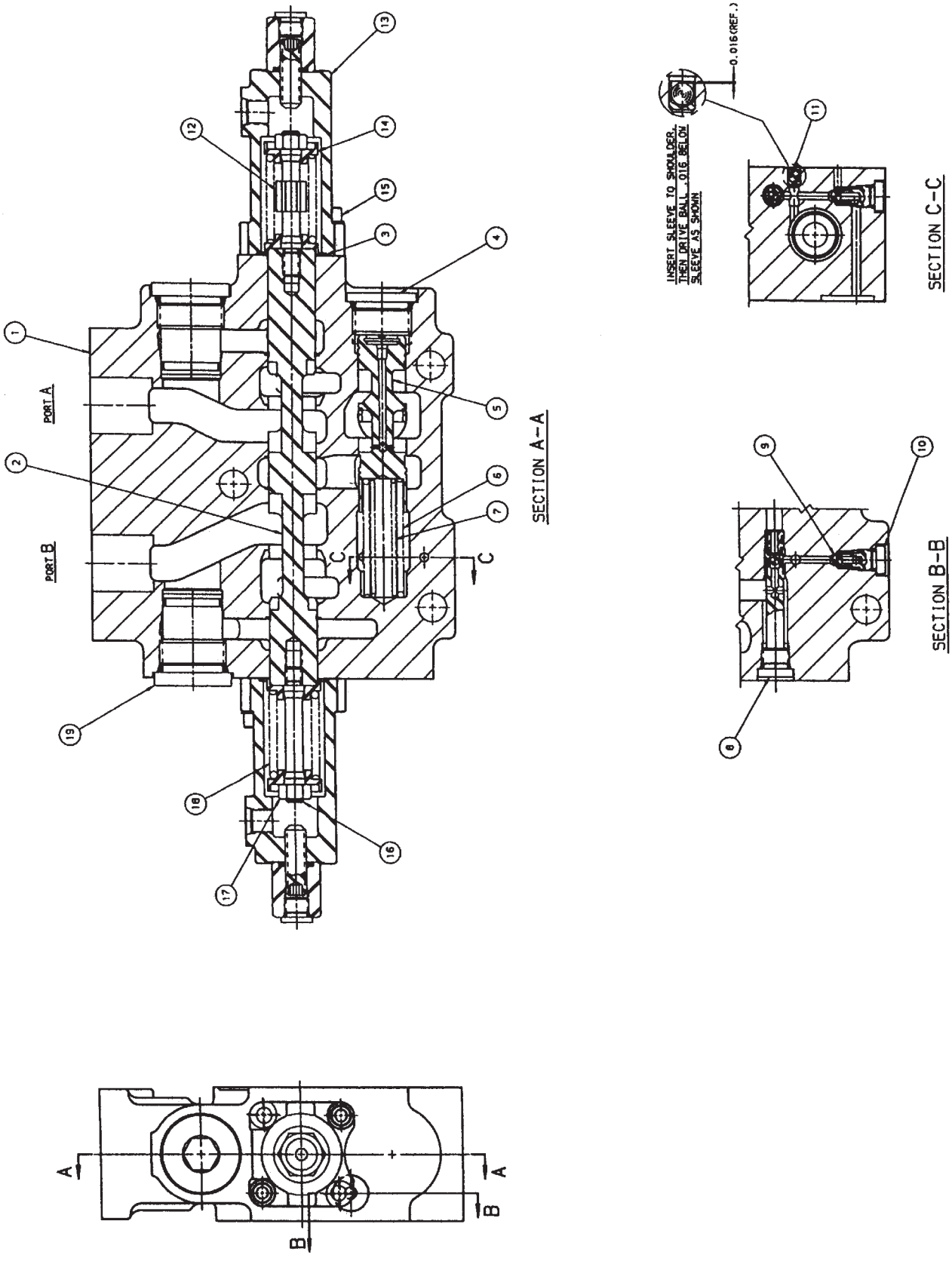


52326378 MOTOR BODY SECTION ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	NSS	1	BODY, FLOAT	
2	52326360	1	SPOOL, MOTOR	
3	52107497	2	O–RING	
4	51858686	1	PLUG W/O–RING	
5	52320744	1	SPOOL, COMPENSATOR	
6	51947596	1	SPRING, COMPENSATOR	
7	52326493	1	ASSEMBLY, PRIMARY HOUSING	
8	51050516	1	BEARING, BALL	
9	52320728	1	ASSEMBLY, SHUTTLE SEAT PLUG	
11	51947638	1	COUPLING, SOLENOID	
12	52320785	2	ASSEMBLY, ACTUATOR HOUSING	
13	51947612	4	RETAINER, SPRING	
14	52320793	4	CAPSCREW, SOCKET HD.	
15	51947570	1	COUPLING, SOLENOID	
16	51947562	2	NUT, HEX.	
17	51947554	2	SPRING	
18	51050490	2	ASSEMBLY, PLUG	
19	51982833	1	ASSEMBLY, REMOTE REGULATOR HOUSING	

NSS NOTE: THESE PARTS ARE NOT SOLD SEPARATELY. THE COMPLETE MOTOR SECTION ASSEMBLY MUST BE PURCHASED.

52326337 MOTOR BODY SECTION ASSEMBLY



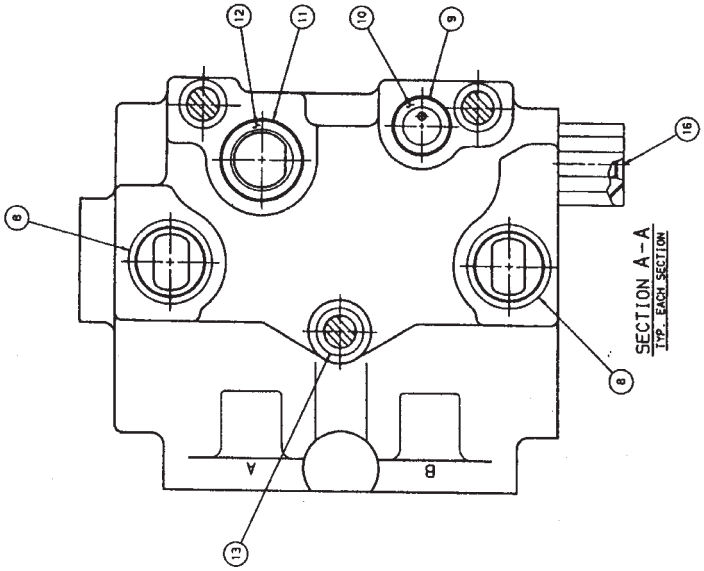
52326337 MOTOR BODY SECTION ASSEMBLY

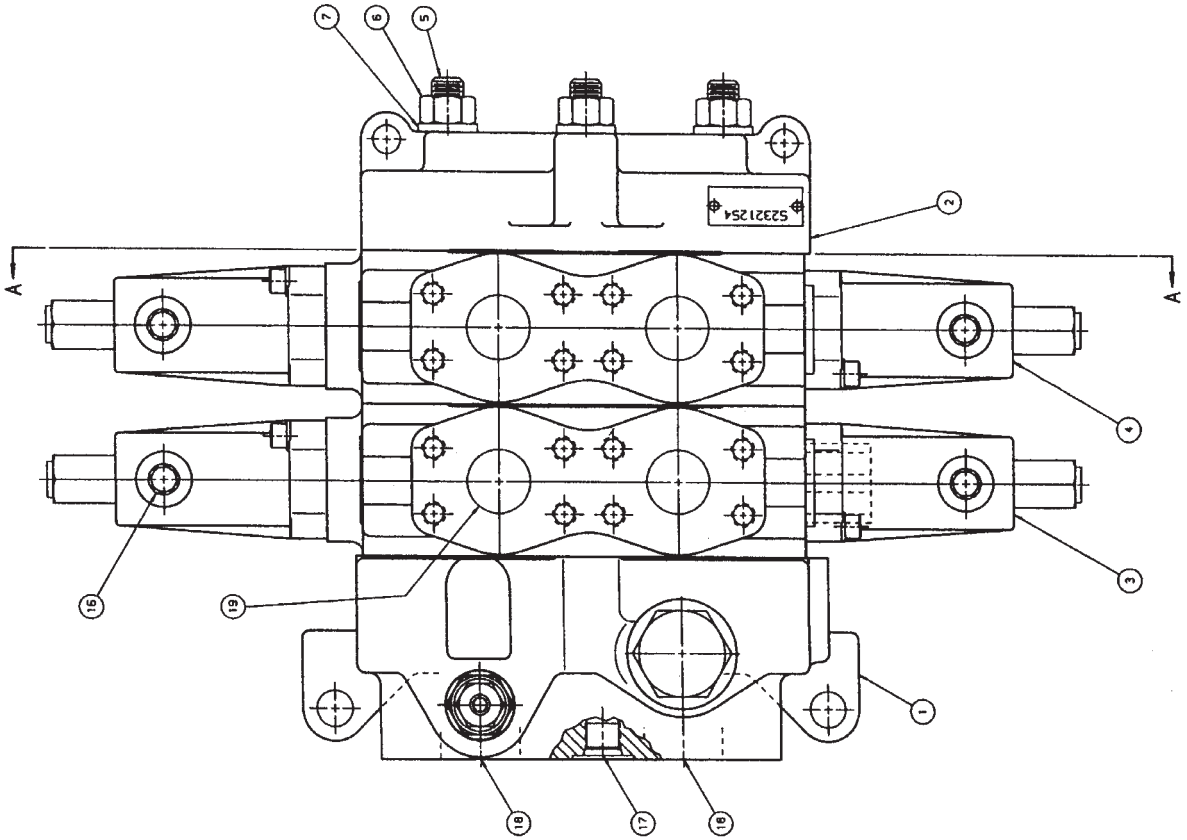
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	NSS	1	BODY, FLOAT	
2	52320736	1	SPOOL, MOTOR	
3	52107497	2	O–RING	
4	51858686	1	PLUG W/O–RING	
5	52320744	1	SPOOL, COMPENSATOR	
6	51947596	1	SPRING, COMPENSATOR	
7	52320751	1	SPRING, COMPENSATOR (INNER)	
8	52326493	1	ASSEMBLY, PRIMARY HOUSING	
9	51050516	1	BEARING, BALL	
10	52320728	1	ASSEMBLY, SHUTTLE SEAT PLUG	
12	51947638	1	COUPLING, SOLENOID	
13	52320785	2	ASSEMBLY, ACTUATOR HOUSING	
14	51947612	4	RETAINER, SPRING	
15	52320793	4	CAPSCREW, SOCKET HD.	
16	51947570	1	COUPLING, SOLENOID	
17	51947562	2	NUT, HEX.	
18	51947554	2	SPRING	
19	51050490	2	ASSEMBLY, PLUG	

NSS NOTE: THESE PARTS ARE NOT SOLD SEPARATELY. THE COMPLETE MOTOR SECTION ASSEMBLY MUST BE PURCHASED.

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52321254 ROTATION/TRAM VALVE



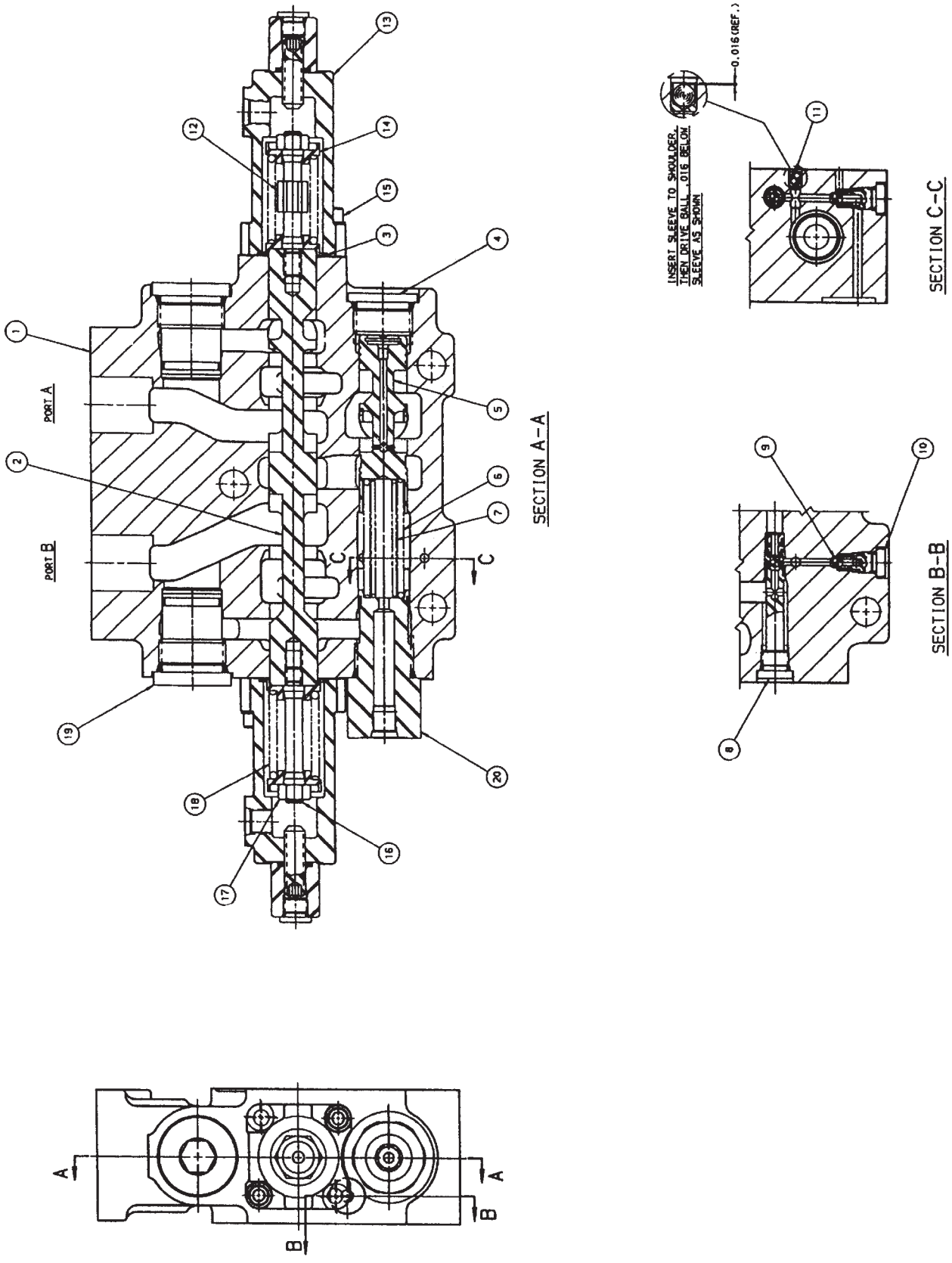


52321254 ROTATION/TRAM VALVE

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52326311	1	ASSEMBLY, INLET BODY SECTION	
2	52107927	1	COVER, END	
3	52326329	1	ASSEMBLY, MOTOR BODY SECTION *REFER TO PAGE 9.27–3*	
4	52326337	1	ASSEMBLY, MOTOR BODY SECTION *REFER TO PAGE 9.27–5*	
5	52326345	3	STUD	
6	52326352	3	NUT, HEX.	
7	52320678	3	WASHER	
8	52320694	6	O–RING	
9	52107968	3	RING, BACKUP	
10	52320702	3	O–RING	
11	52107984	3	RING, BACKUP	
12	51719664	3	O–RING	
13	51050326	9	SHIM	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52326329 MOTOR BODY SECTION ASSEMBLY



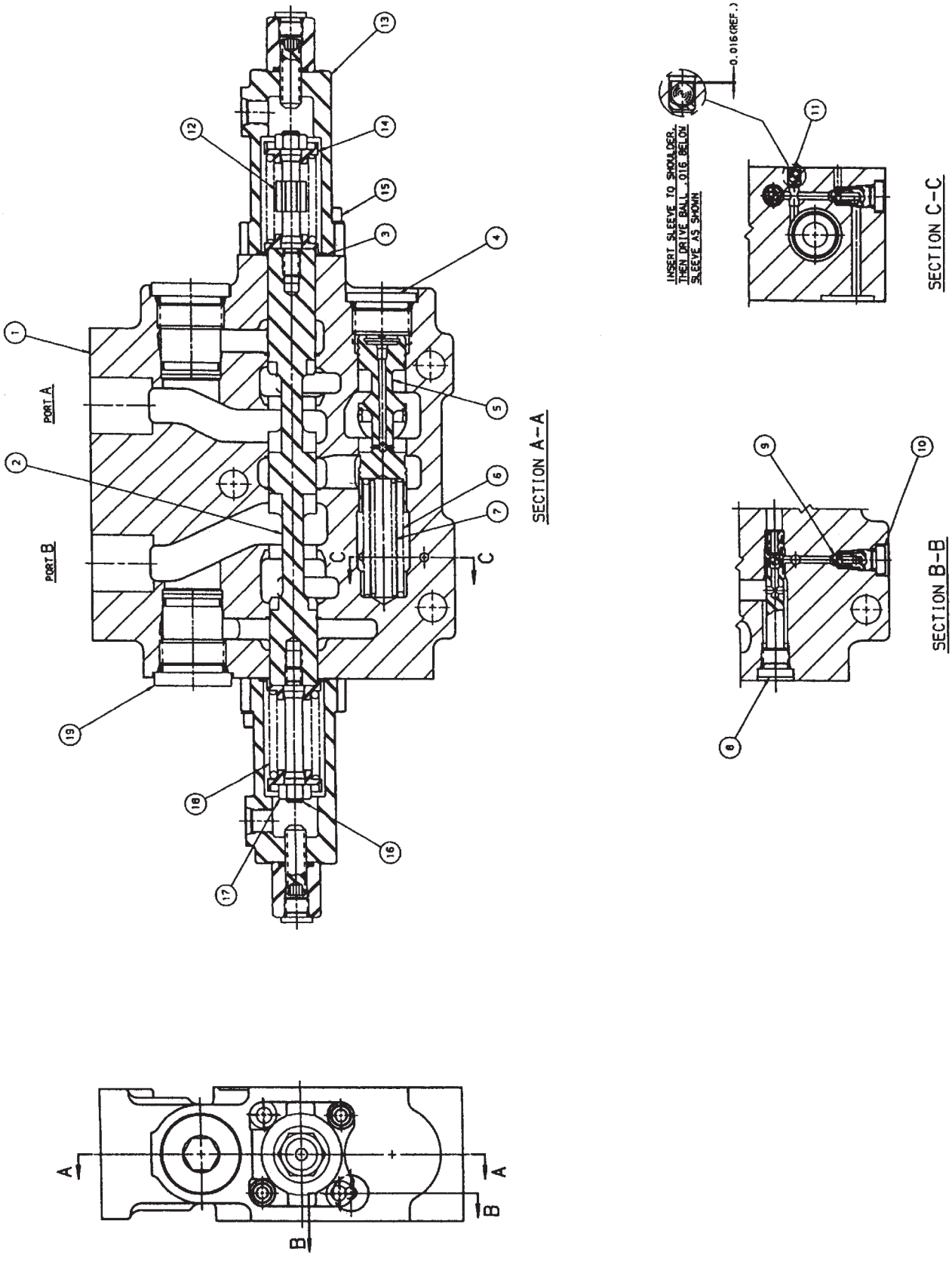
52326329 MOTOR BODY SECTION ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	NSS	1	BODY, FLOAT	
2	52326360	1	SPOOL, MOTOR	
3	52107497	2	O–RING	
4	51858686	1	PLUG W/O–RING	
5	52320744	1	SPOOL, COMPENSATOR	
6	51947596	1	SPRING, COMPENSATOR	
7	52320751	1	SPRING, COMPENSATOR (INNER)	
8	52326493	1	ASSEMBLY, PRIMARY HOUSING	
9	51050516	1	BEARING, BALL	
10	52320728	1	ASSEMBLY, SHUTTLE SEAT PLUG	
12	51947638	1	COUPLING, SOLENOID	
13	52320785	2	ASSEMBLY, ACTUATOR HOUSING	
14	51947612	4	RETAINER, SPRING	
15	52320793	4	CAPSCREW, SOCKET HD.	
16	51947570	1	COUPLING, SOLENOID	
17	51947562	2	NUT, HEX.	
18	51947554	2	SPRING	
19	51050490	2	ASSEMBLY, PLUG	
20	51982833	1	ASSEMBLY, REMOTE REGULATOR HOUSING	

NSS NOTE: THESE PARTS ARE NOT SOLD SEPARATELY. THE COMPLETE MOTOR SECTION ASSEMBLY MUST BE PURCHASED.

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52326337 MOTOR BODY SECTION ASSEMBLY



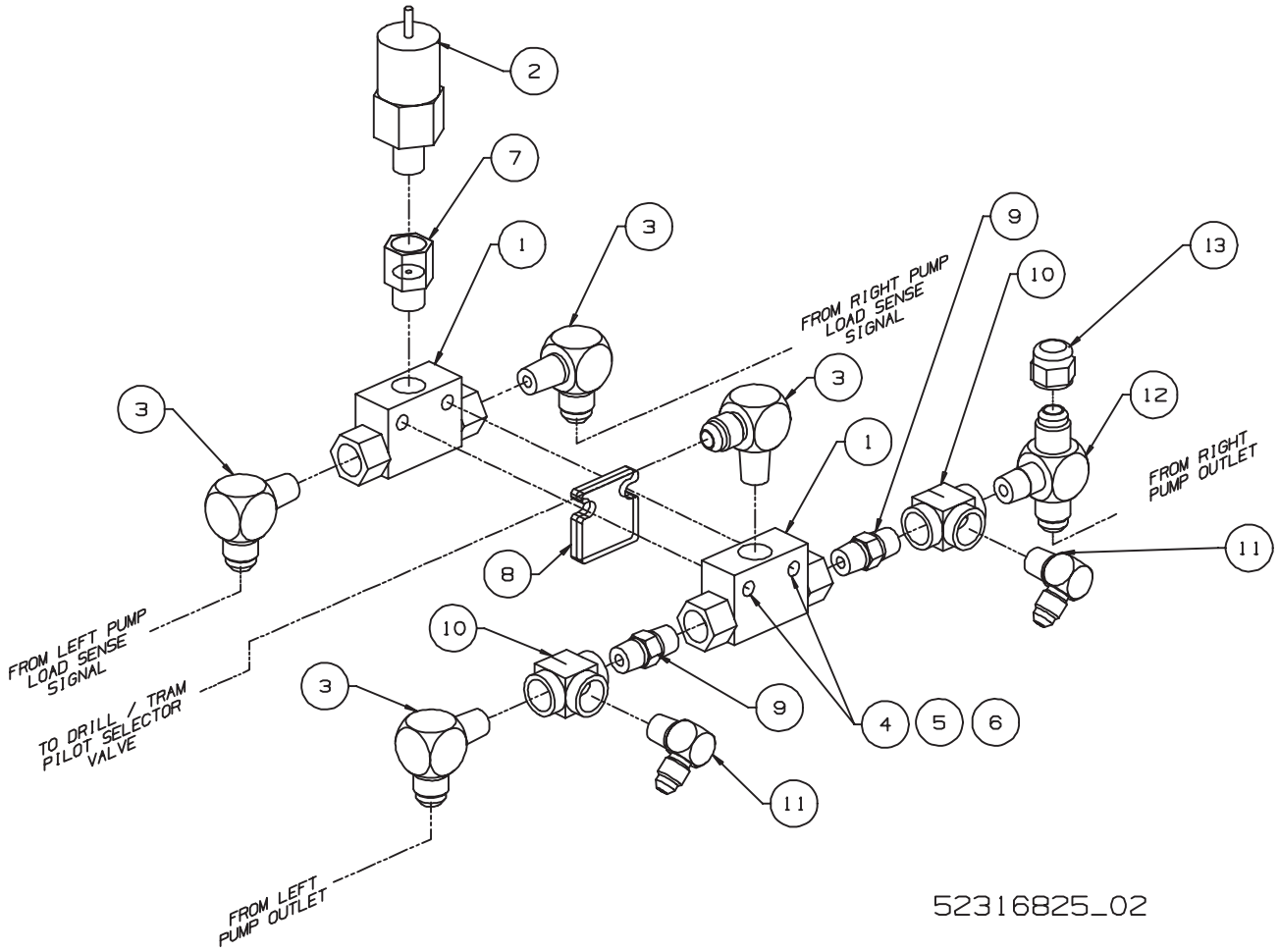
52326337 MOTOR BODY SECTION ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	NSS	1	BODY, FLOAT	
2	52320736	1	SPOOL, MOTOR	
3	52107497	2	O–RING	
4	51858686	1	PLUG W/O–RING	
5	52320744	1	SPOOL, COMPENSATOR	
6	51947596	1	SPRING, COMPENSATOR	
7	52320751	1	SPRING, COMPENSATOR (INNER)	
8	52326493	1	ASSEMBLY, PRIMARY HOUSING	
9	51050516	1	BEARING, BALL	
10	52320728	1	ASSEMBLY, SHUTTLE SEAT PLUG	
12	51947638	1	COUPLING, SOLENOID	
13	52320785	2	ASSEMBLY, ACTUATOR HOUSING	
14	51947612	4	RETAINER, SPRING	
15	52320793	4	CAPSCREW, SOCKET HD.	
16	51947570	1	COUPLING, SOLENOID	
17	51947562	2	NUT, HEX.	
18	51947554	2	SPRING	
19	51050490	2	ASSEMBLY, PLUG	

NSS NOTE: THESE PARTS ARE NOT SOLD SEPARATELY. THE COMPLETE MOTOR SECTION ASSEMBLY MUST BE PURCHASED.

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

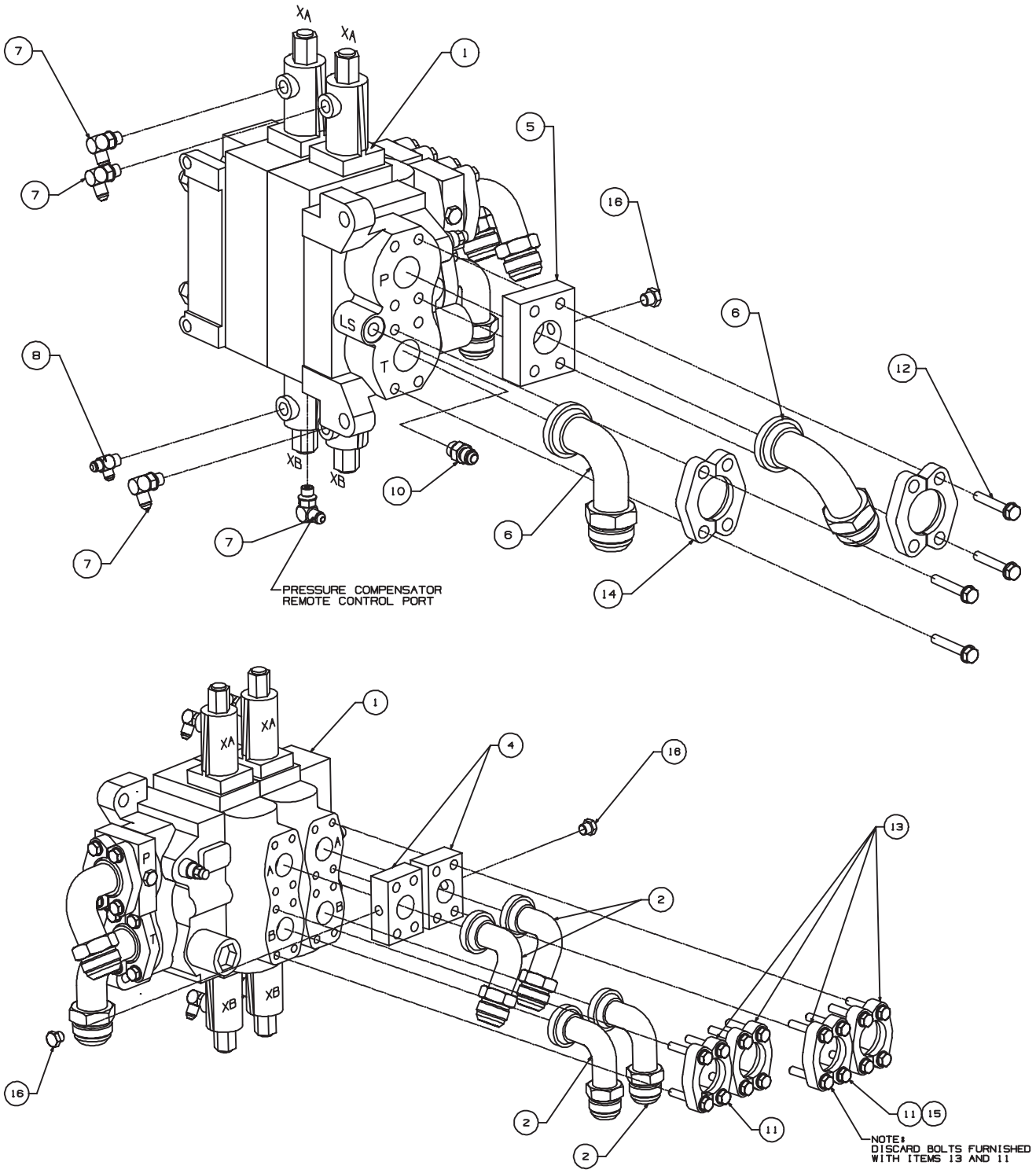
52316825 LOAD SENSE SHUTTLE VALVE ASSEMBLY



52316825 LOAD SENSE SHUTTLE VALVE ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	50805100	2	VALVE, SHUTTLE	
2	52115649	1	SWITCH, PRESSURE	
3	95209094	4	ADAPTER	
4	95922050	2	SCREW, MACHINE	
4	96744826	2	BOLT, HEXHEAD	
5	95942769	4	WASHER, FLAT	
6	95943346	2	NUT, LOCK	
7	52292570	1	ADAPTER	
8	52327012	1	SPACER	
9	95323457	2	ADAPTER	
10	95302998	2	TEE, ADAPTER	
11	95293403	2	ELBOW	
12	56924962	1	FITTING, HYD–TEE ADAPTER	
13	95257341	1	CAP	

52329836 VALVE ASSY, LH TRAM/FEED



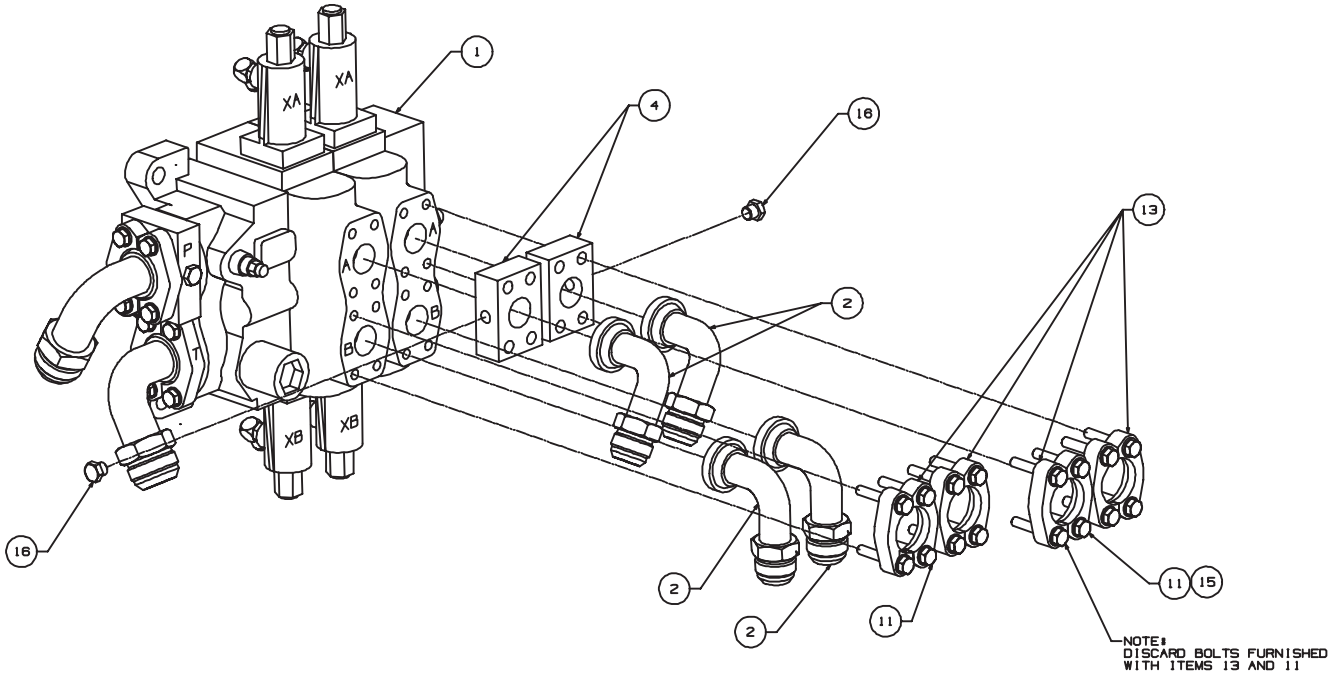
VALVE ASSEMBLY, LEFT TRAM / FEED

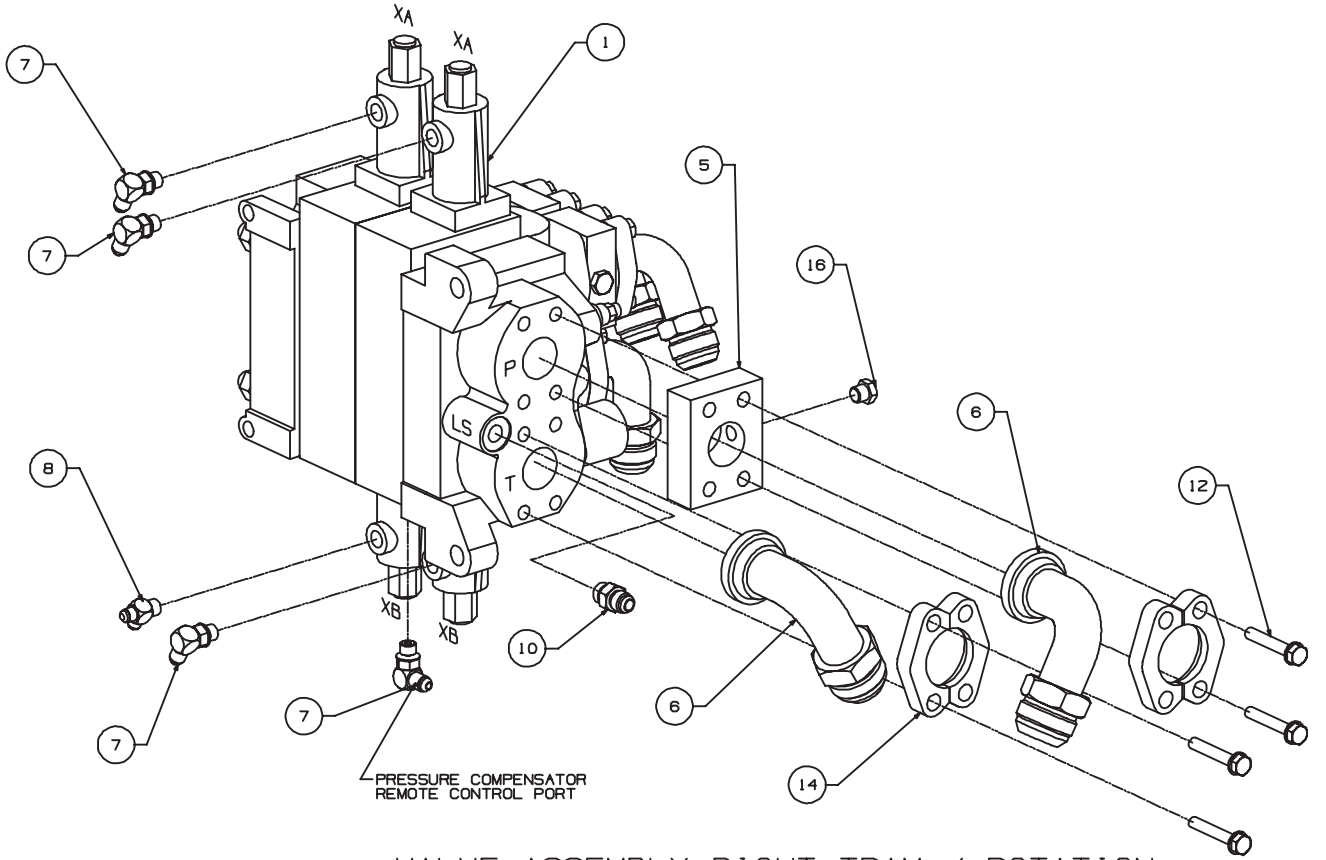
52329836 VALVE ASSY, LH TRAM/FEED

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52321239	1	VALVE, FEED, TRAM *REFER TO PAGE 9.26–1*	
2	85691202	2	ADAPTER	
3	56988778	2	ADAPTER	
4	52324803	2	BLIND FLANGE	
5	52329869	2	BLIND FLANGE	
6	52086311	2	ADAPTER, ELBOW	
7	95341665	3	ELBOW	
8	95147971	1	TEE	
9	95002937	1	ELBOW	
10	57199028	1	CONNECTOR, STRT THRD	
11	52324811	2	KIT, MOUNTING	
12	52329877	1	KIT, MOUNTING	
13	52086329	4	KIT, FLANGE	
14	52086337	2	KIT, FLANGE	
15	95919288	8	CAPSCREW	
16	95250932	2	PLUG	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52329844 VALVE ASSY, RH TRAM/FEED





VALVE ASSEMBLY RIGHT TRAM / ROTATION

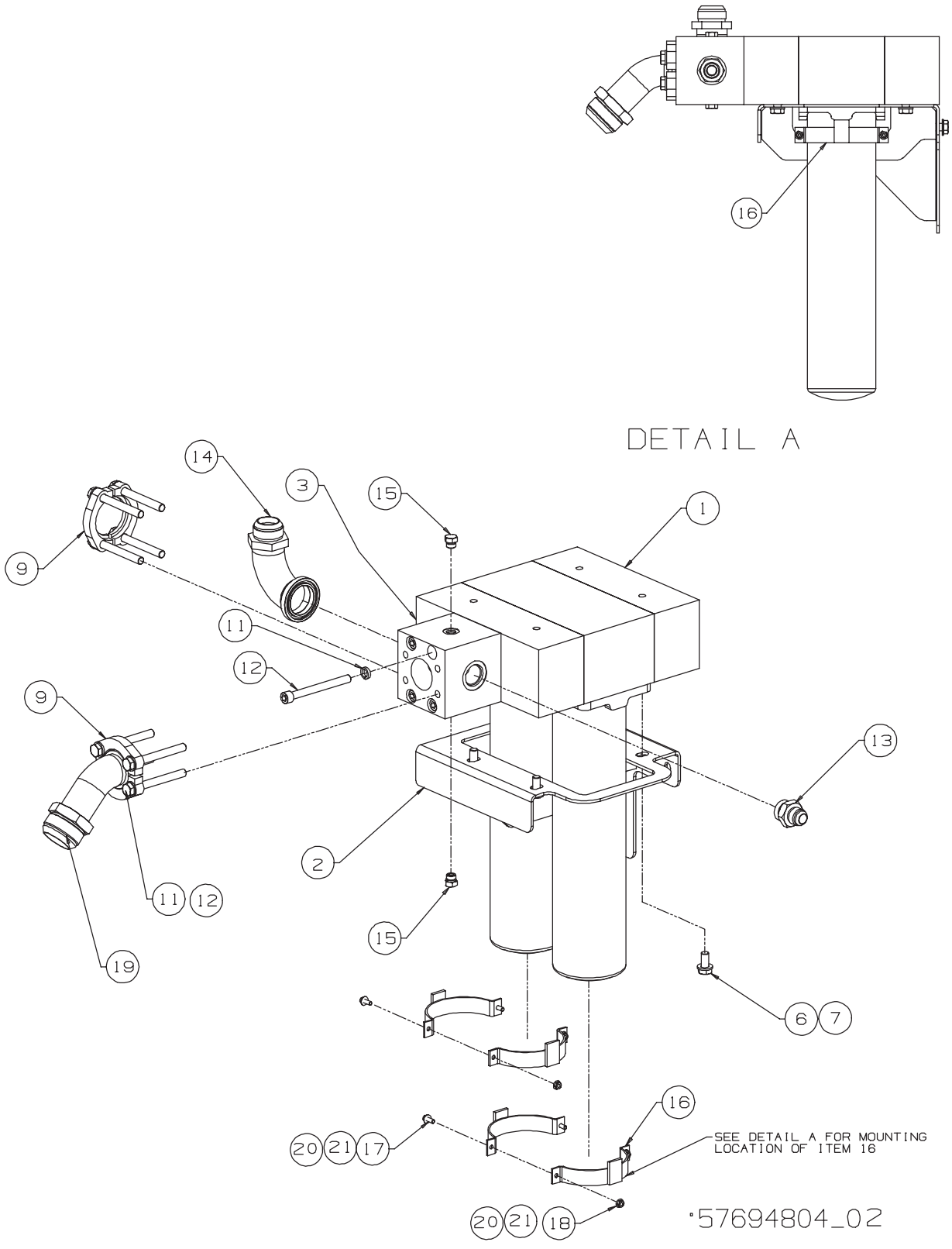
52329844_00

52329844 VALVE ASSY,RH TRAM/ROT

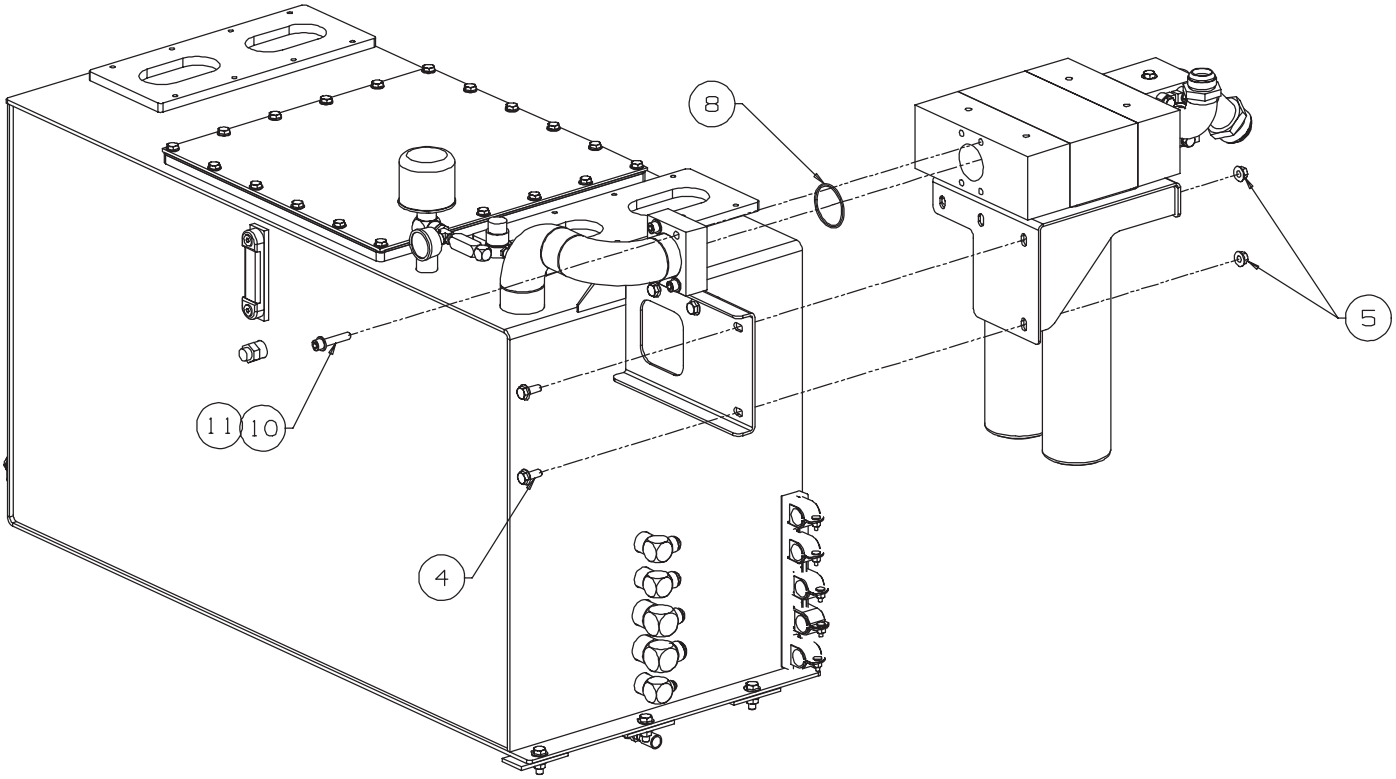
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52321254	1	VALVE, ROTATION, TRAM *REFER TO PAGE 9.27–1*	
2	85691202	2	ADAPTER	
4	52324803	2	BLIND FLANGE	
5	52329869	2	BLIND FLANGE	
6	52086311	2	ADAPTER, ELBOW	
7	95341665	3	ELBOW	
8	95147971	1	TEE	
10	57199028	1	FITTING, HYD	
11	52324811	2	KIT, MOUNTING	
12	52329877	1	KIT, MOUNTING	
13	52086329	4	KIT, FLANGE	
14	52086337	2	KIT, FLANGE	
15	95919288	8	CAPSCREW	
16	95250932	2	PLUG	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57694804 HYDRAULIC OIL RETURN FILTER ASSEMBLY



57694804 HYDRAULIC OIL RETURN FILTER ASSEMBLY

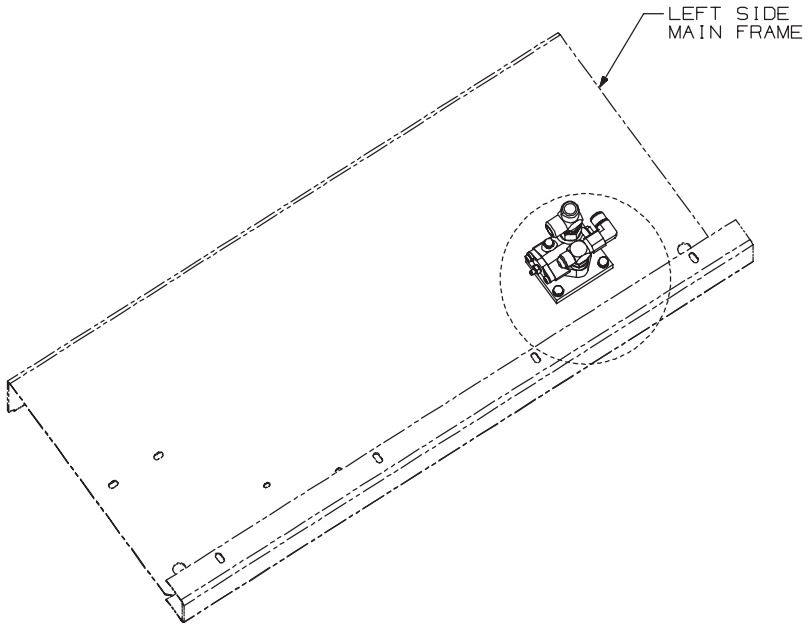


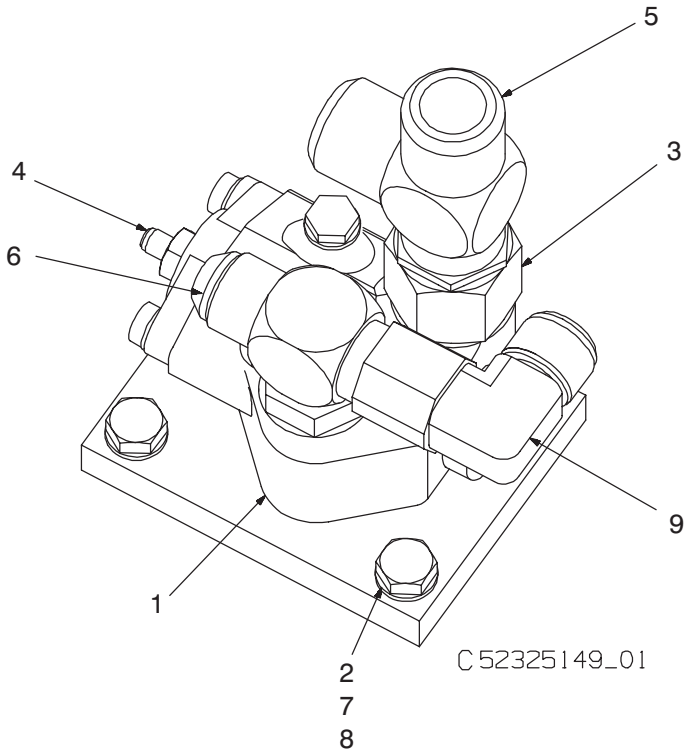
Ingersoll-Rand

57694804 HYDRAULIC OIL RETURN FILTER ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52321338	1	FILTER, HYDRAULIC RETURN	
		1	*REFER TO PAGE 9.53–1*	
2	52319316	1	BRACKET, HYDRAULIC OIL RETURN FILTER SUPPORT	
3	52319225	1	MANIFOLD, HYDRAULIC OIL RETURN FILTER	
4	96727177	3	BOLT, FLANGED HD.	
5	96726815	3	LOCKNUT, FLANGED HD.	
6	95919544	4	CAPSCREW, HEX. HD.	
7	50977289	4	WASHER, FLAT	
8	95086583	2	O–RING	
9	51914299	2	KIT, FLANGE	
10	95055059	4	CAPSCREW, SOC. HD.	
11	95955936	8	LOCKWASHER, HI COLLAR	
12	95055133	4	CAPSCREW, SOC. HD.	
13	95356978	1	ADAPTER	
14	57347411	1	ADAPTER	
15	95666996	2	PLUG, PORT	
16	57698714	4	CLAMP	
17	95934568	2	BOLT	
18	95931564	4	NUT	
19	52304631	1	ADAPTER, SPLIT–FLANGE	
20	95934766	2	WASHER, LOCK	
21	95922324	4	WASHER, FLAT	

52325149 RAD/CAC COOLER FAN VALVE ASSEMBLY





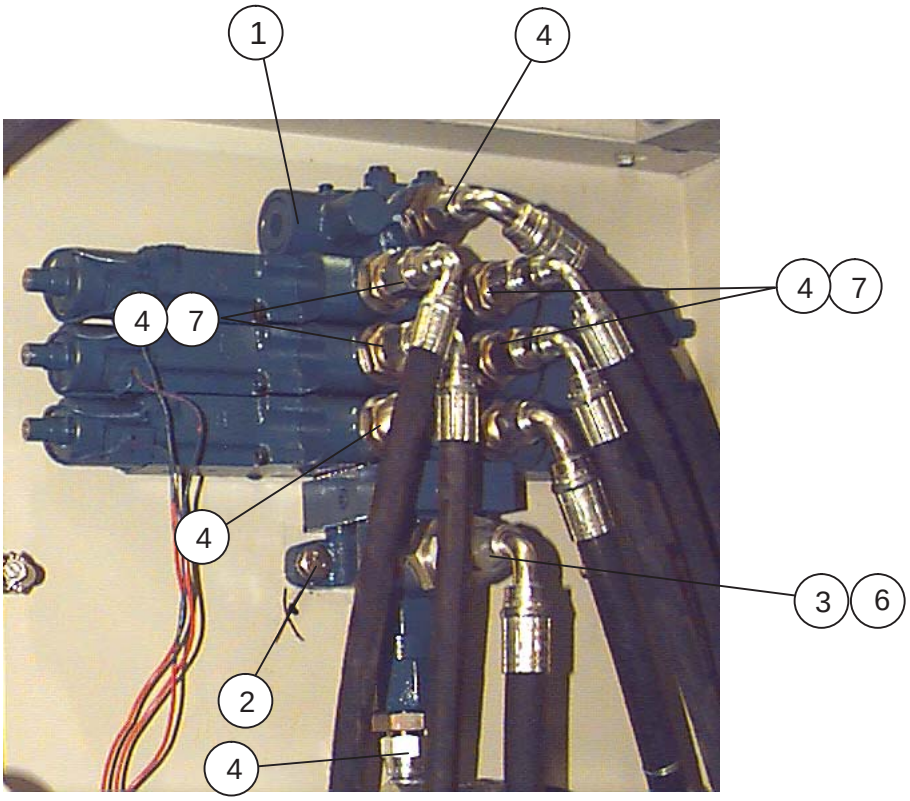
52325149 RAD/CAC COOLER FAN VALVE ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52302015	1	VALVE, FAN CONTROL	
2	96719794	2	CAPSCREW	
3	95708301	1	ADAPTER	
4	52118841	1	ADAPTER	
5	95488110	1	ADAPTER, TEE	
6	52304862	1	ADAPTER, TEE	
7	96726807	2	LOCKNUT, FLANGED HD.	
8	96701982	2	WASHER, FLAT HD.	
9	95302147	1	ADAPTER	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52318664 DUST COLLECTOR/ARC SELECTOR /DUSTHOOD/ CENTRALIZER CONTROL VALVE ASSEMBLY

LOCATION

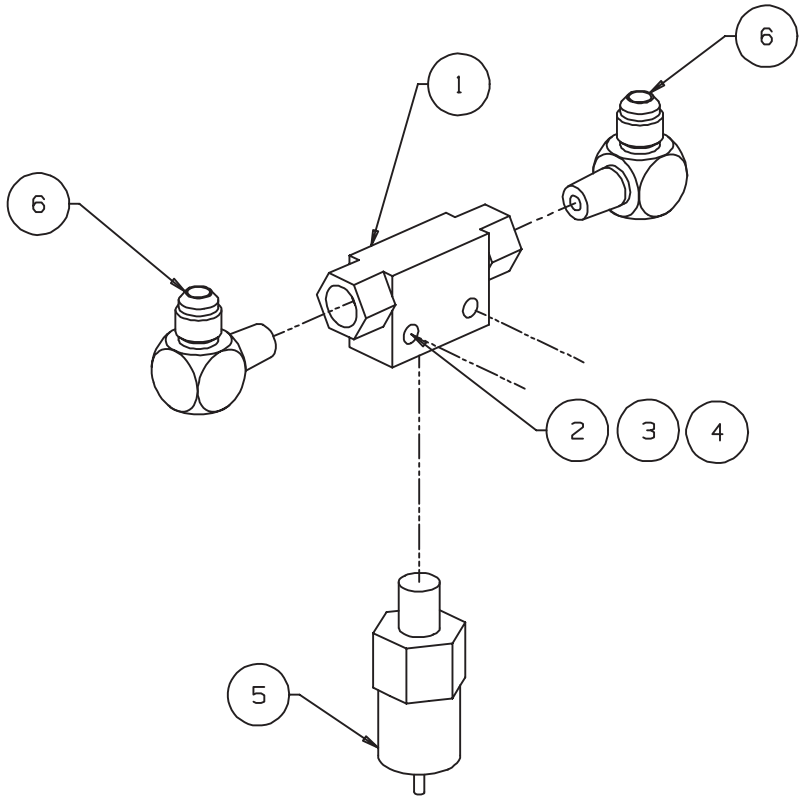


52318664 DUST COLLECTOR/ARC SELECTOR /DUSTHOOD/ CENTRALIZER CONTROL VALVE ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51680486	1	VALVE, DC/ARC/DH/CENTRALIZER CONTROL	
			REFER TO PAGE 9.42–1	
2	96726914	3	BOLT, FLANGED HD.	
3	52306396	1	ADAPTER, CONVERSION	
4	52301751	8	ADAPTER, CONVERSION	
6	56956220	1	ADAPTER	
7	51028751	4	ADAPTER	
8	54651286	1	RECEPTACLE,8 CIRCUIT	
9	59436840	8	PIN,SIZE 16	
10	59437227	1	WEDGE	
11	57400004	1	PLUG, SEALING	

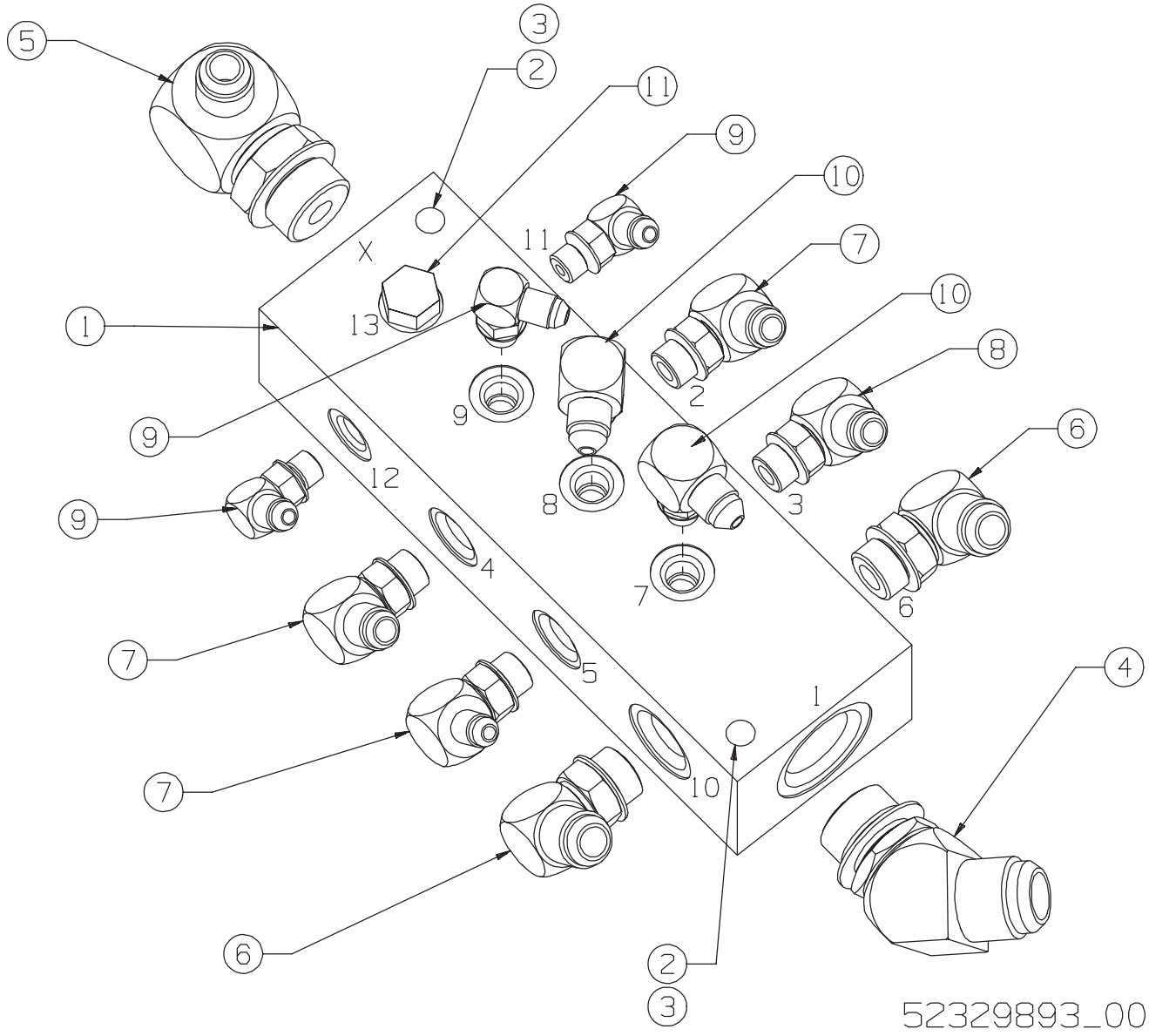
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57708596 BACKUP ALARM PRESSURE SWITCH SHUTTLE VALVE ASSY.



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	50805100	1	VALVE, BACKUP ALARM PRESSURE SWITCH SHUTTLE	
2	96738448	2	BOLT, HEX. HD.	
3	96702493	4	WASHER, FLAT	
4	96715008	2	NUT, LOCK	
5	51716017	1	SWITCH, PRESSURE	
6	94293403	2	ADAPTER	

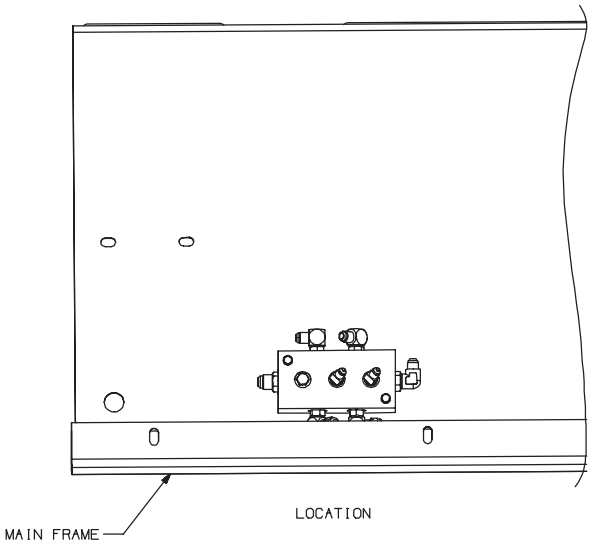
52329893 MAIN DRAIN MANIFOLD ASSEMBLY

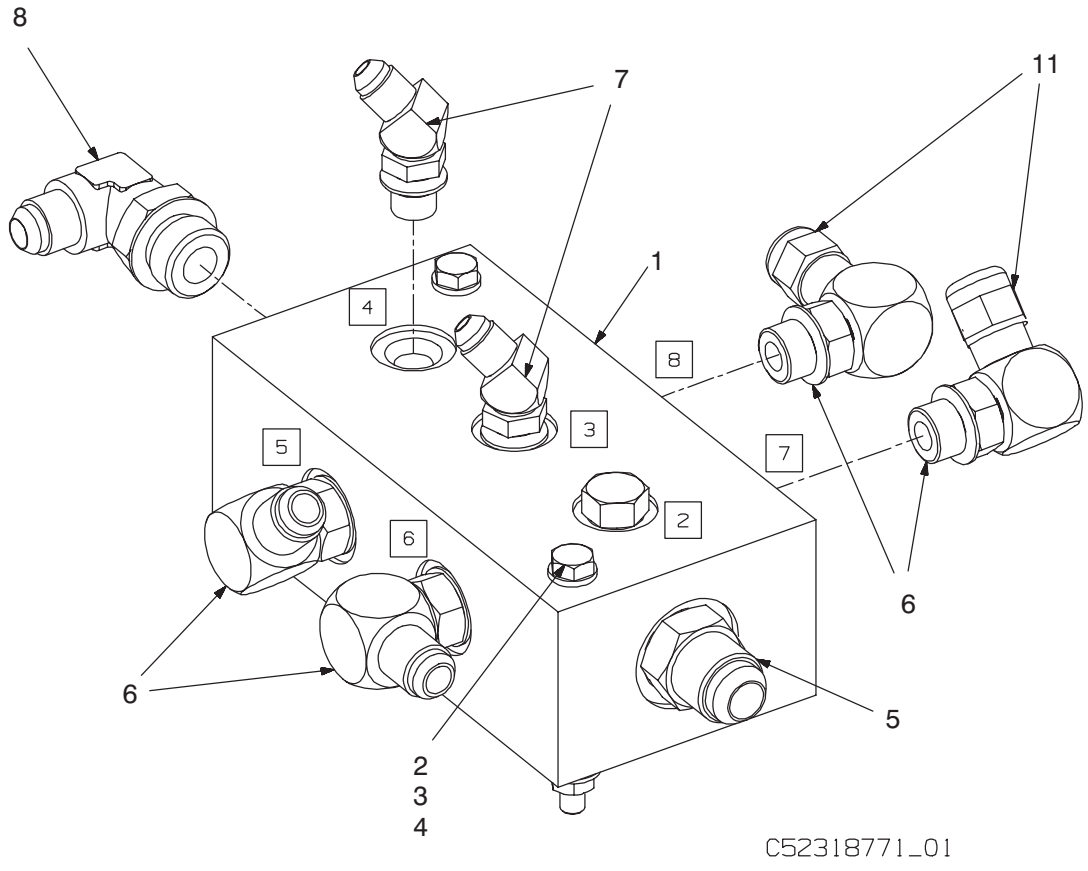


52329893 MAIN DRAIN MANIFOLD ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51608693	1	MANIFOLD, MAIN DRAIN	
2	96714688	2	BOLT, HEX. HD.	
3	96702519	2	WASHER	
4	95679031	1	FITTING, TUBE	
5	95330692	1	ELBOW	
6	95303335	2	ELBOW	
7	95329975	3	ELBOW	
8	95365094	1	ELBOW	
9	95341665	4	ADAPTER	
10	95653614	2	ADAPTER, 90 DEGREE	
11	95754867	1	FITTING	

52318771 COOLERS DRAIN MANIFOLD ASSEMBLY



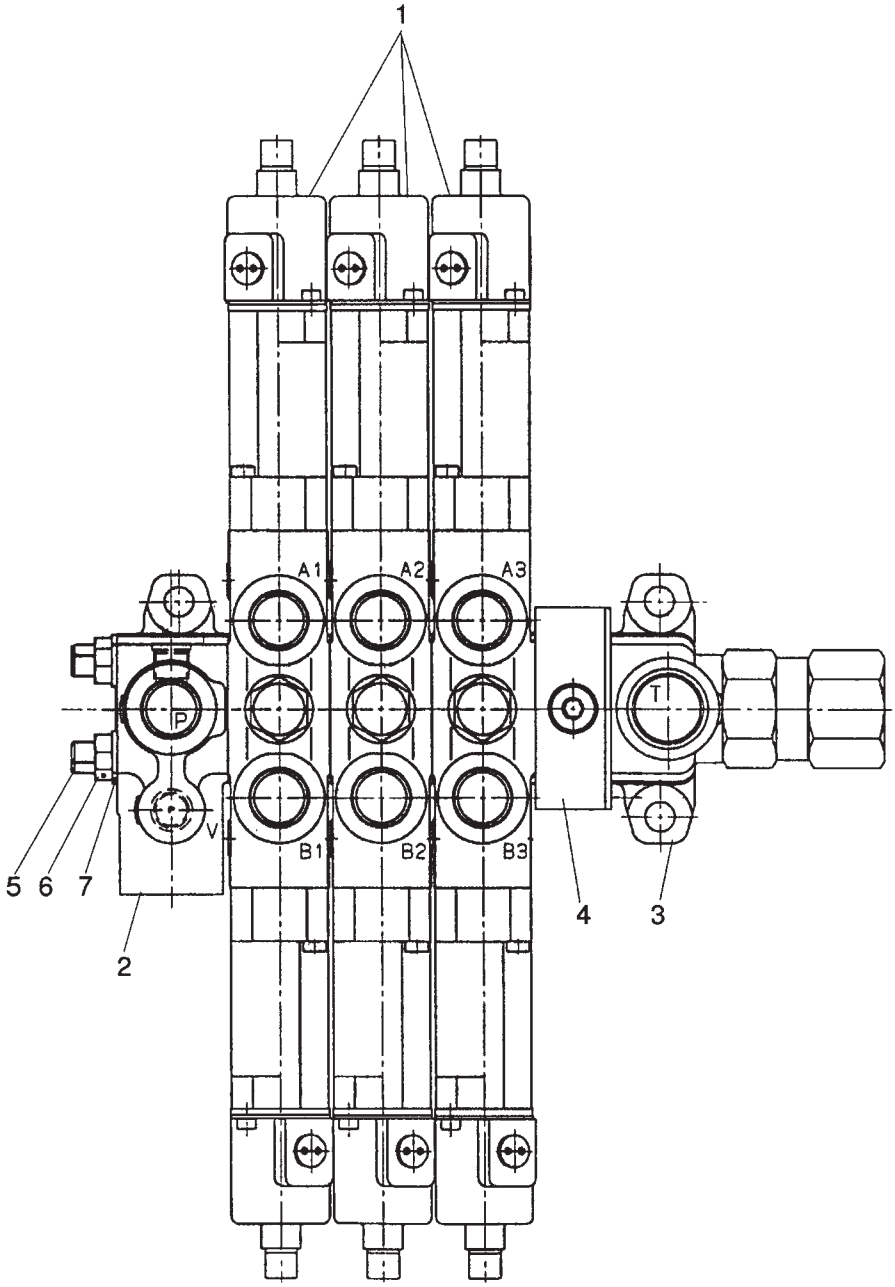


52318771 COOLERS DRAIN MANIFOLD ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51608685	1	MANIFOLD, COOLERS DRAIN	
2	96706825	2	BOLT, HEX. HD.	
3	96726781	2	LOCKNUT, FLANGED HD.	
4	96702501	2	WASHER, FLAT	
5	95303368	1	ADAPTER	
6	95329975	4	ADAPTER	
7	95002937	2	ADAPTER	
8	95356853	1	ADAPTER	
10	95323366	1	PLUG	
11	95257341	2	CAP	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

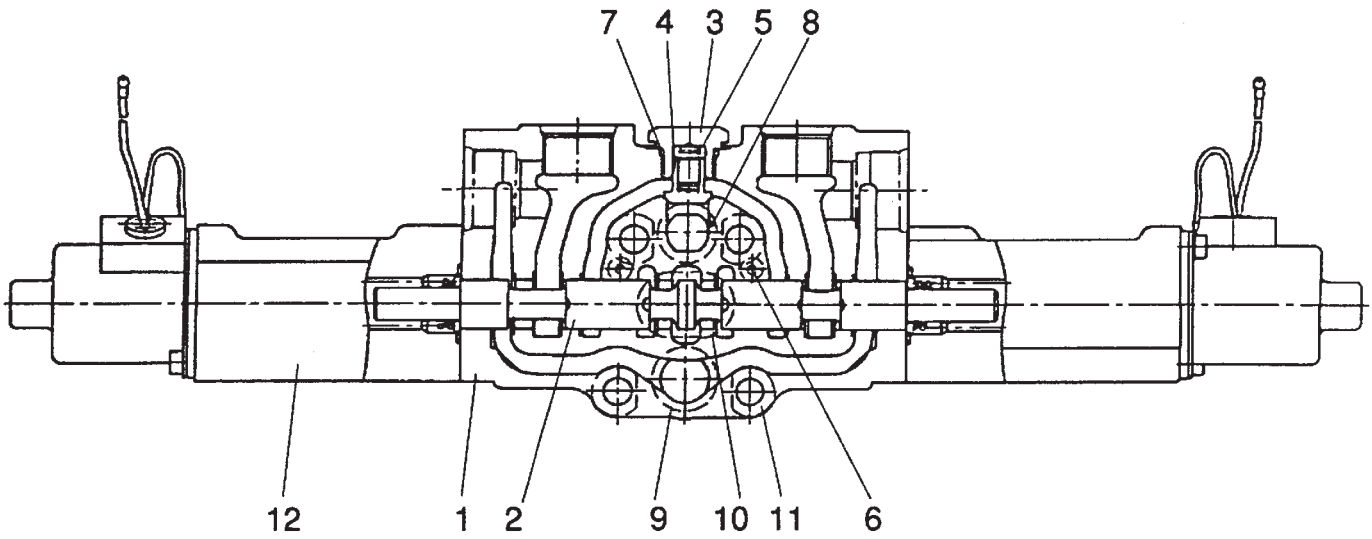
51680486 DUST COLLECTOR/ARC SELECTOR/DUSTHOOD/ CENTRALIZER CONTROL VALVE



51680486 DUST COLLECTOR/ARC SELECTOR /DUSTHOOD/ CENTRALIZER CONTROL VALVE

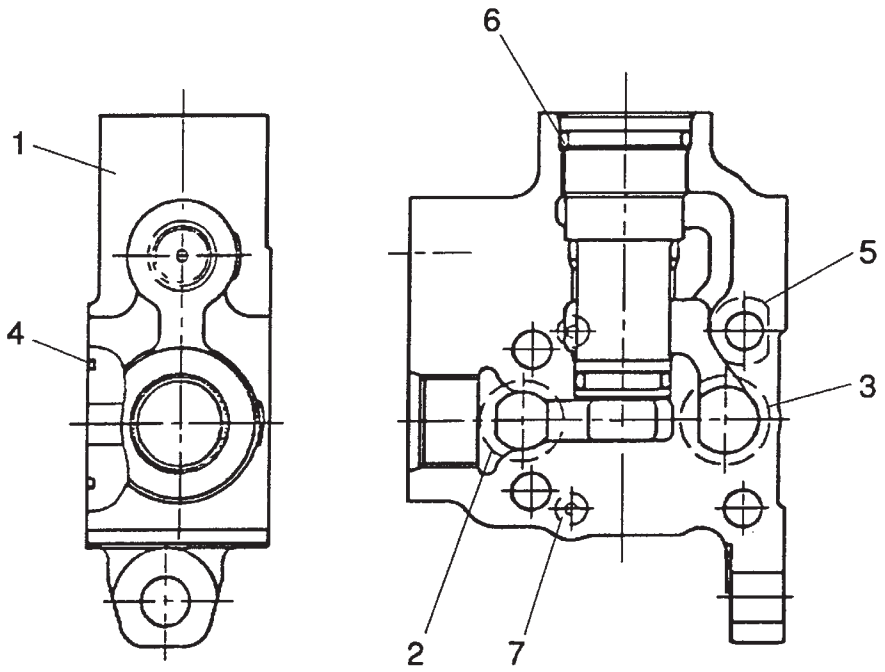
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	53119566	3	ASSEMBLY, BODY *REFER TO PAGE 9.42–3*	
2	53119574	1	ASSEMBLY, P–COVER *REFER TO PAGE 9.42–4*	
3	53119582	1	ASSEMBLY, T–COVER *REFER TO PAGE 9.42–5*	
4	53119616	1	ASSEMBLY, VALVE BLOCK *REFER TO PAGE 9.42–6*	
5	53119590	4	BOLT, TIE	
6	50850924	4	NUT	
7	50788454	4	WASHER, SPRING	

53119566 BODY ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	53139143	1	BODY	
2	53139150	1	SPOOL	
3	53139168	1	PLUG	
4	53139176	1	PLUNGER	
5	53139184	1	SPRING	
6	51204469	2	O–RING	
7	53138947	1	O–RING	
8	53138954	1	RING	
9	53138921	1	RING	
10	53138939	1	RING	
11	53139127	4	SHIM	
12	53133732	2	ASSEMBLY, PILOT COVER	

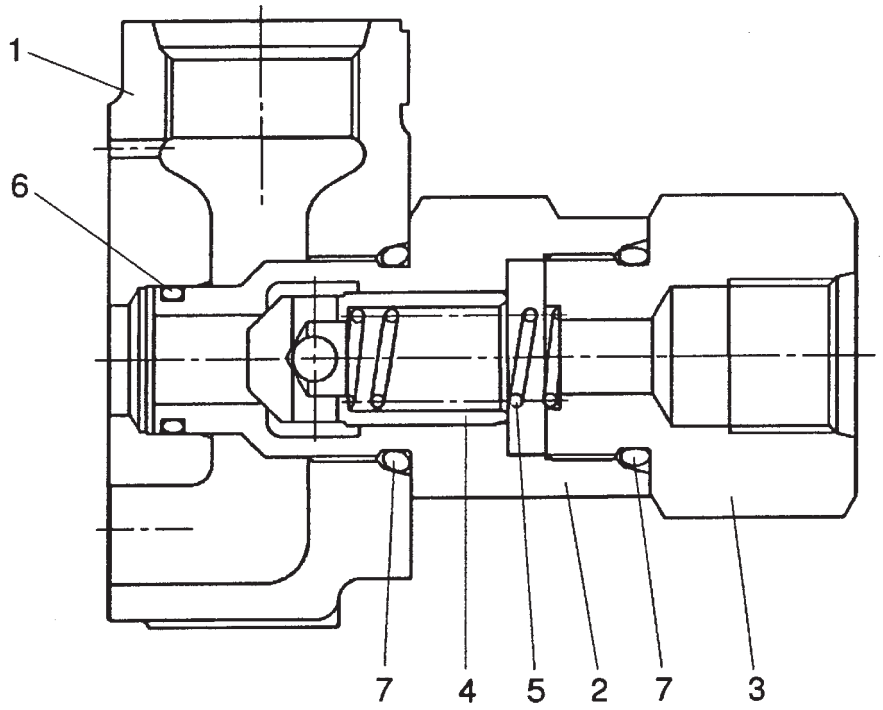
53119574 P–COVER ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	++	1	COVER	
2	53138954	1	RING	
3	53138921	1	RING	
4	53138939	1	RING	
5	53139127	4	SHIM	
6	53139192	1	ASSEMBLY, PLUG	
7	51204469	2	O–RING	

++ NOTE: THIS PART IS NOT SOLD SEPARATELY.

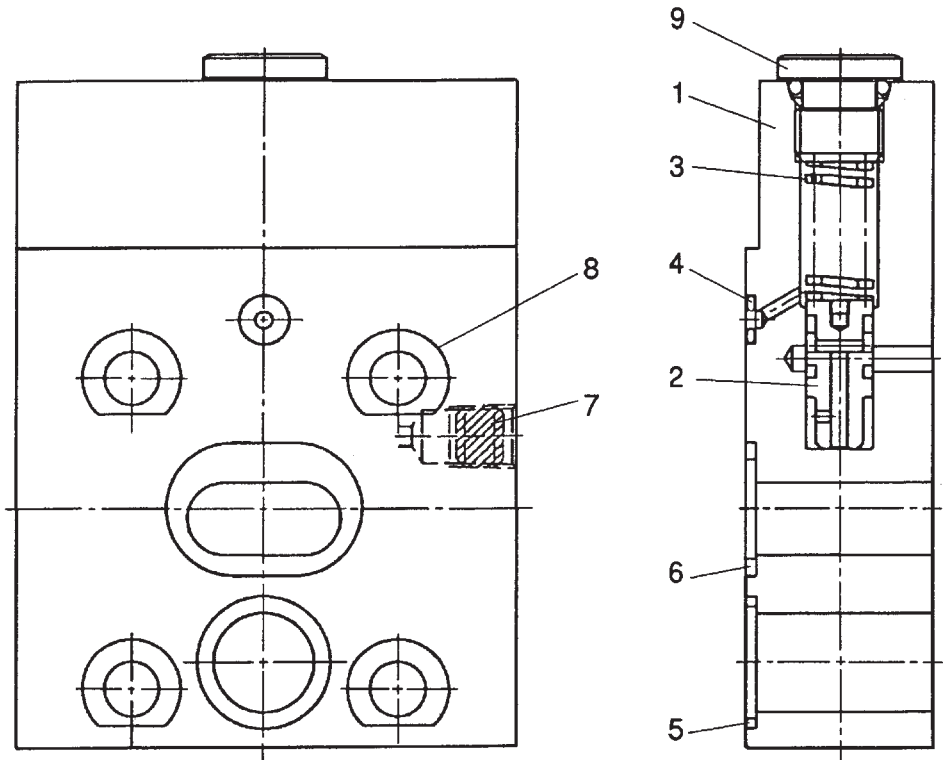
53119582 T–COVER ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	++	1	COVER	
2	++	1	BODY	
3	++	1	BUSHING	
4	++	1	PLUNGER	
5	++	1	SPRING	
6	50854884	1	O–RING	
7	51103778	2	O–RING	

++ NOTE: THESE PARTS ARE NOT SOLD SEPARATELY.

53119616 VALVE BLOCK ASSEMBLY

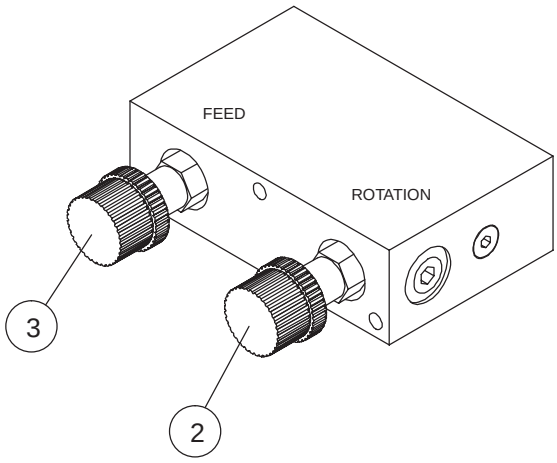


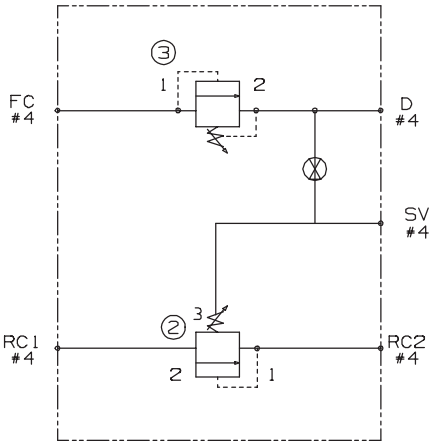
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	++	1	BODY	
2	++	1	SPOOL	
3	++	1	SPRING	
4	51204469	1	O–RING	
5	53138921	1	RING	
6	53138939	1	RING	
7	++	1	PLUG	
8	++	4	SHIM	
9	++	1	PLUG	

++ NOTE: THESE PARTS ARE NOT SOLD SEPARATELY.

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

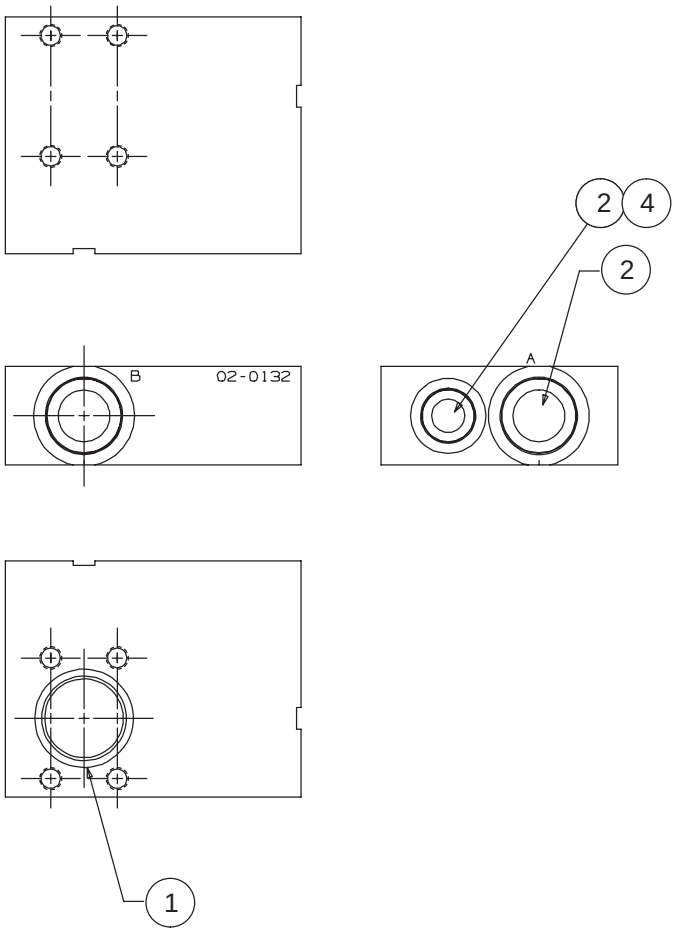
52321262 FEED/ROTATION CONTROL VALVE (CAB)

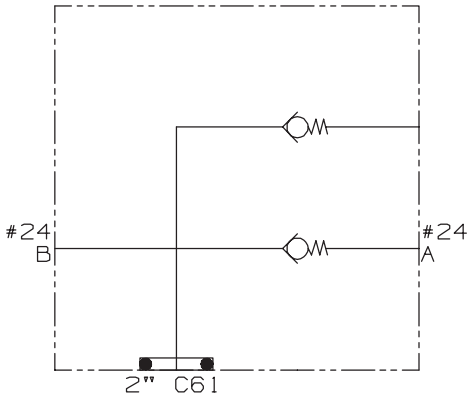




REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
2	52301033	1	CARTRIDGE, ROTATION	
3	51776821	1	CARTRIDGE, FEED	

57668592 COMPRESSOR OIL BYPASS VALVE

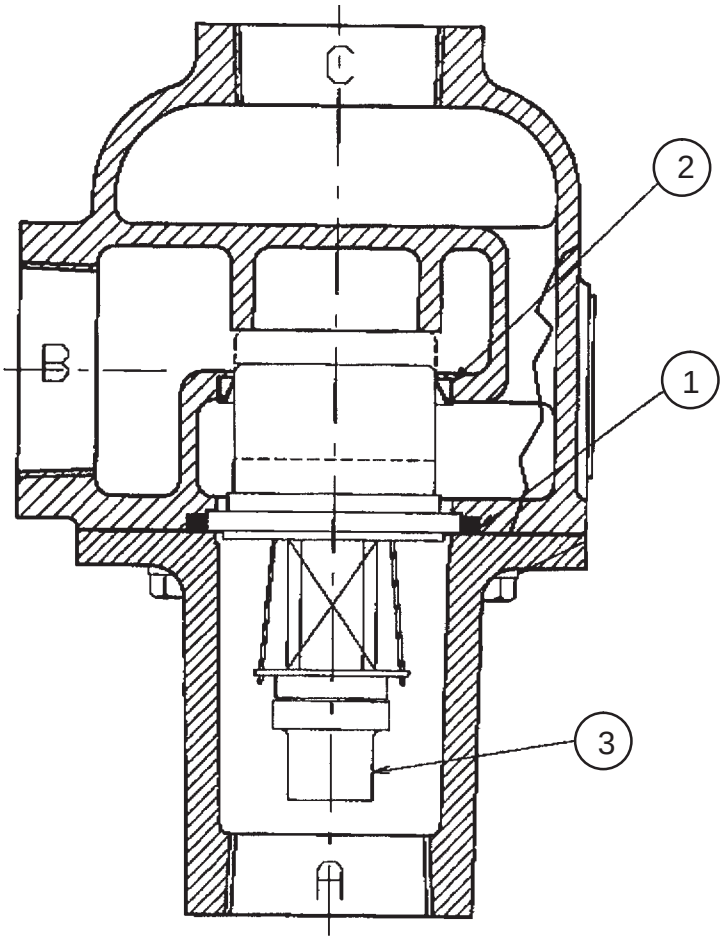




HYDRAULIC SCHEMATIC

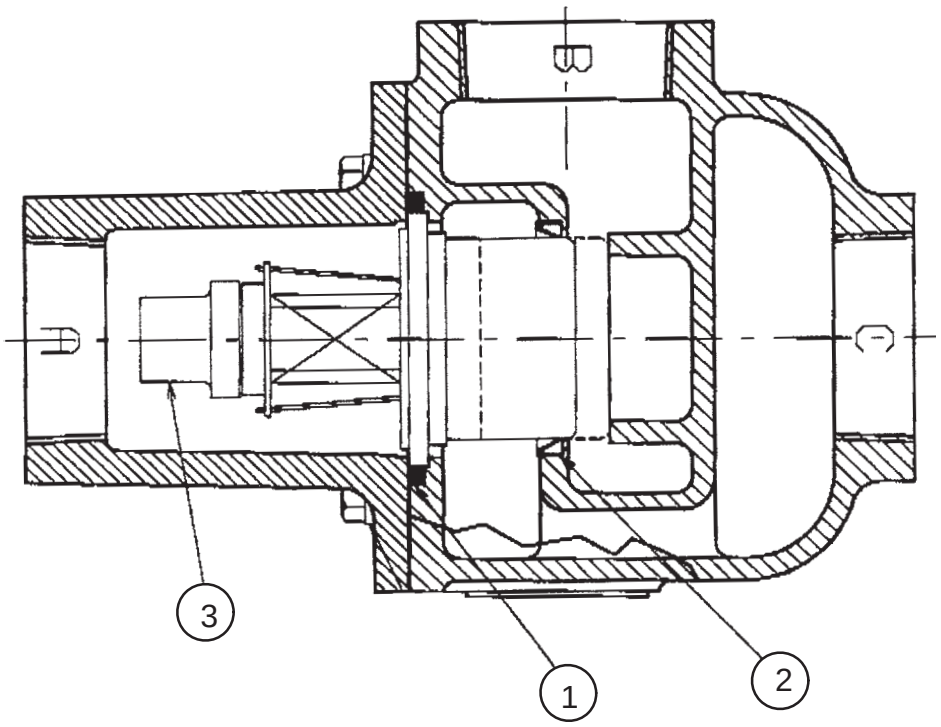
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	95018461	1	O–RING	
2	52330974	2	VALVE, CHECK	
3	51869188	2	KIT, RETAINER/SEAL	
4	95527990	1	PLUG, PORT	

52301629 HYDRAULIC THERMOSTATIC VALVE (120 DEGREE NOM.)



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52320215	1	SEAL, O–RING	
2	52320223	1	SEAL, LIP	
3	52320231	1	ELEMENT	

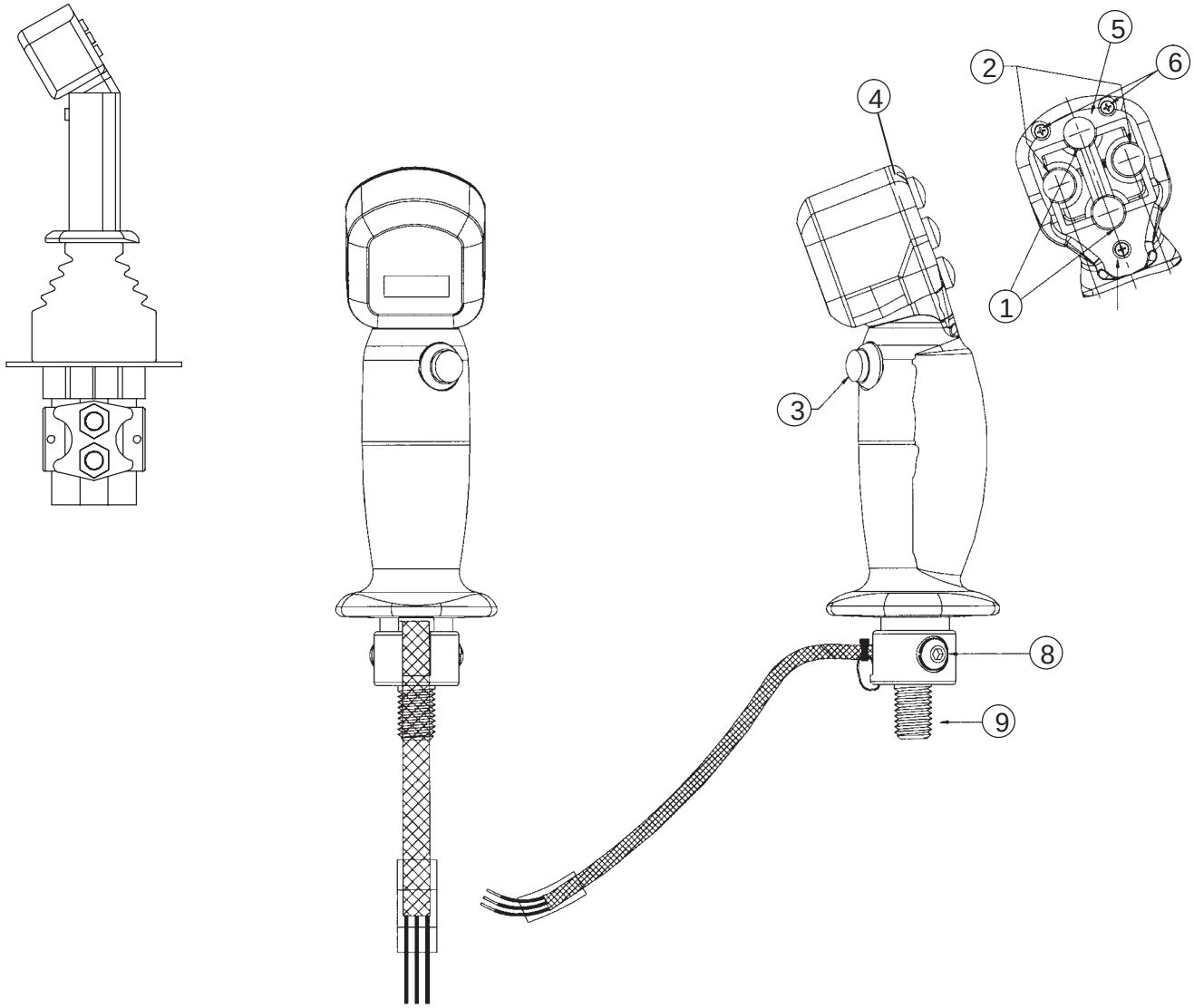
57657587 HYDRAULIC THERMOSTATIC VALVE (150 DEGREE NOM.)



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52320215	1	SEAL, O–RING	
2	52320223	1	SEAL, LIP	
3	52322518	1	ELEMENT	

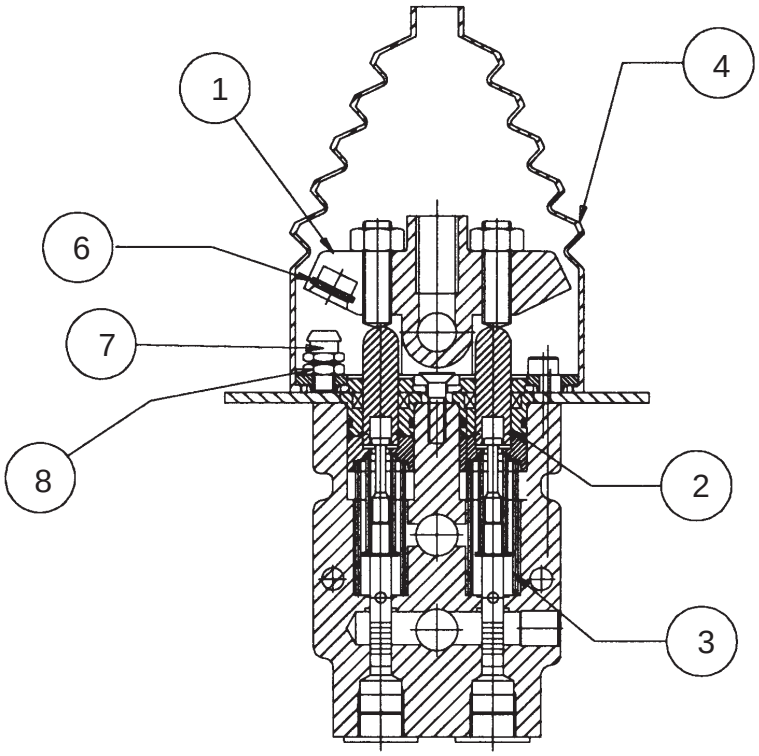
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52324902 ROTATION FUNCTION CONTROL VALVE



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
	52325974	1	ASSEMBLY, MODE VALVE HANDLE	
1	52322542	2	.SWITCH, BLUE	
2	52322559	2	.SWITCH, ORANGE	
3	52322567	1	.SWITCH, GREEN	
4	52322575	1	.PLATE, BACK	
5	52322583	1	.PLATE, FACE	
6	52325859	2	.SCREW	
7	52325842	1	.SCREW	
8	52325875	1	.SCREW, LOCKING	
9	52325867	1	.ADAPTER, MOUNTING	

52324902 ROTATION FUNCTION CONTROL VALVE

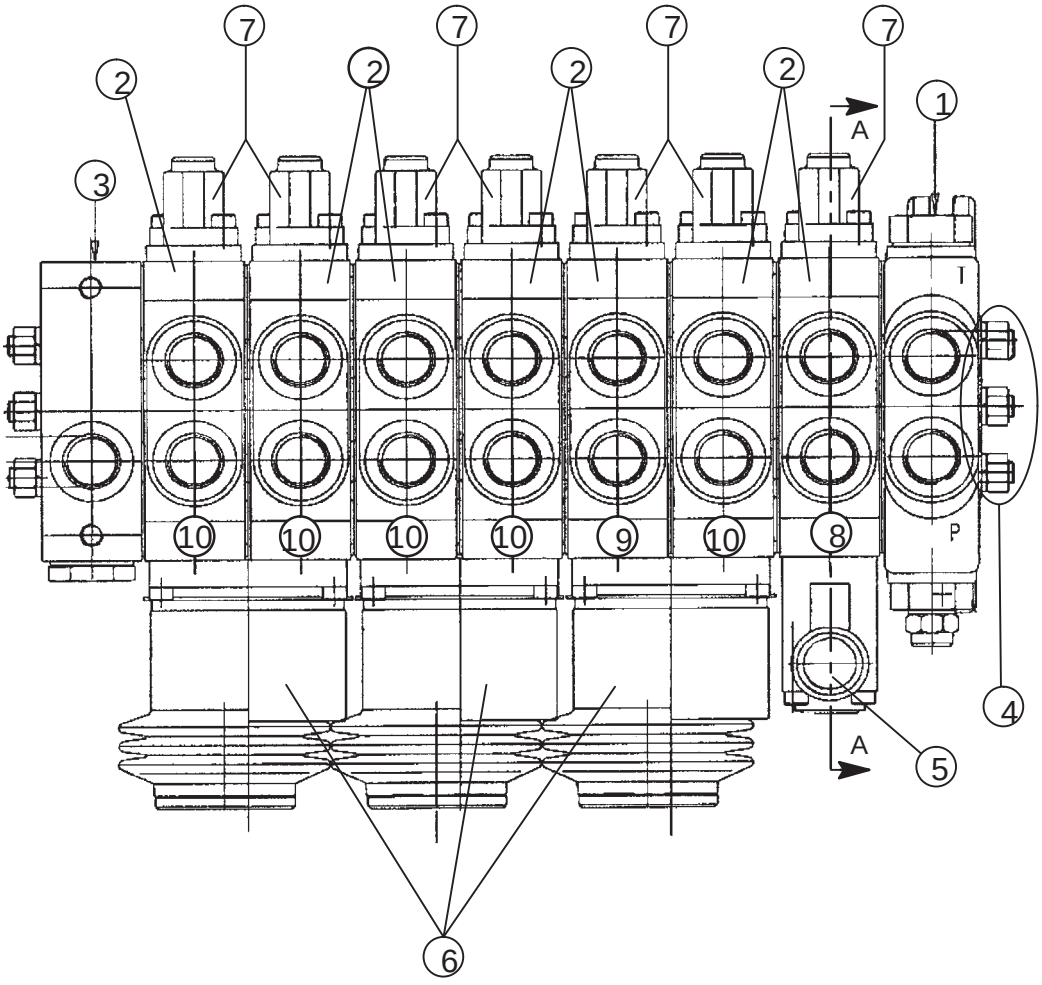


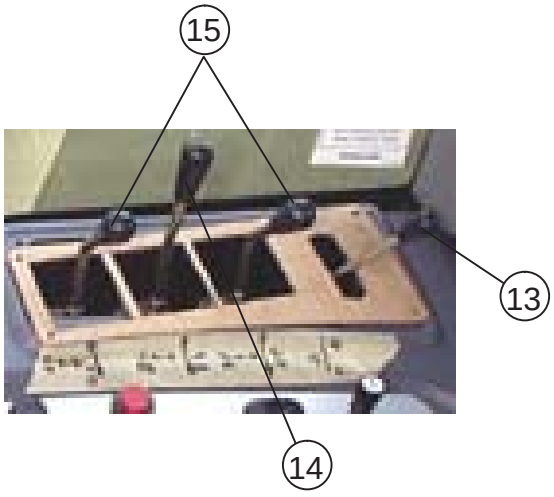
NOTE: REFERENCE NO. 5 IS NOT ILLUSTRATED.

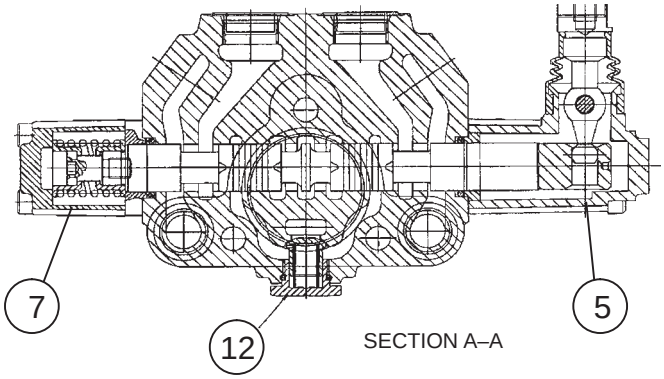
REF. NO.	*PART NO.*	*QTY.*	*PART NAME* / *REMARKS*	*SERIAL NO.*
	52325966	1	ASSEMBLY, MODE VALVE FUNCTION BODY	
1	52325958	1	.DETENT, POSITION ONE	
2	52325941	4	.CURVE, SPRING	
3	52325933	4	.SPRING, RETURN	
4	52325925	1	.BOOT	
5	52325917	1	.KIT, SEAL	
6	52325909	1	.CLIP, DETENT	
7	52325891	1	.STUD, DETENT	
8	52325883	1	.NUT	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52311537 POSITIONING CONTROL VALVE



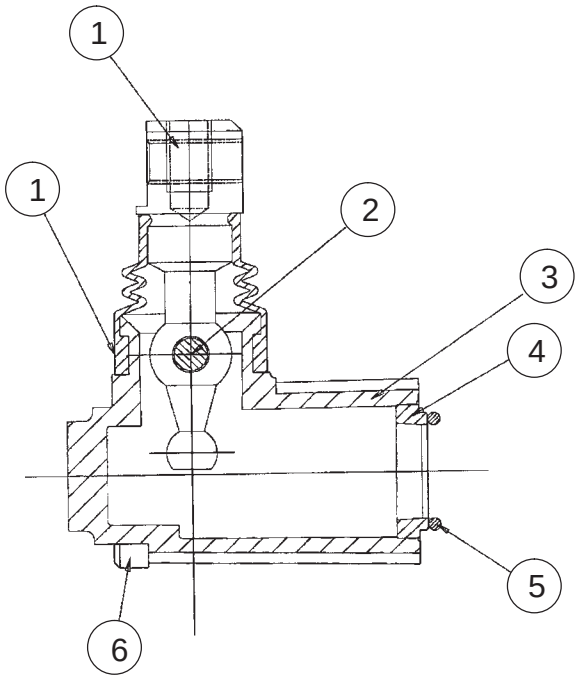




52311537 POSITIONING CONTROL VALVE

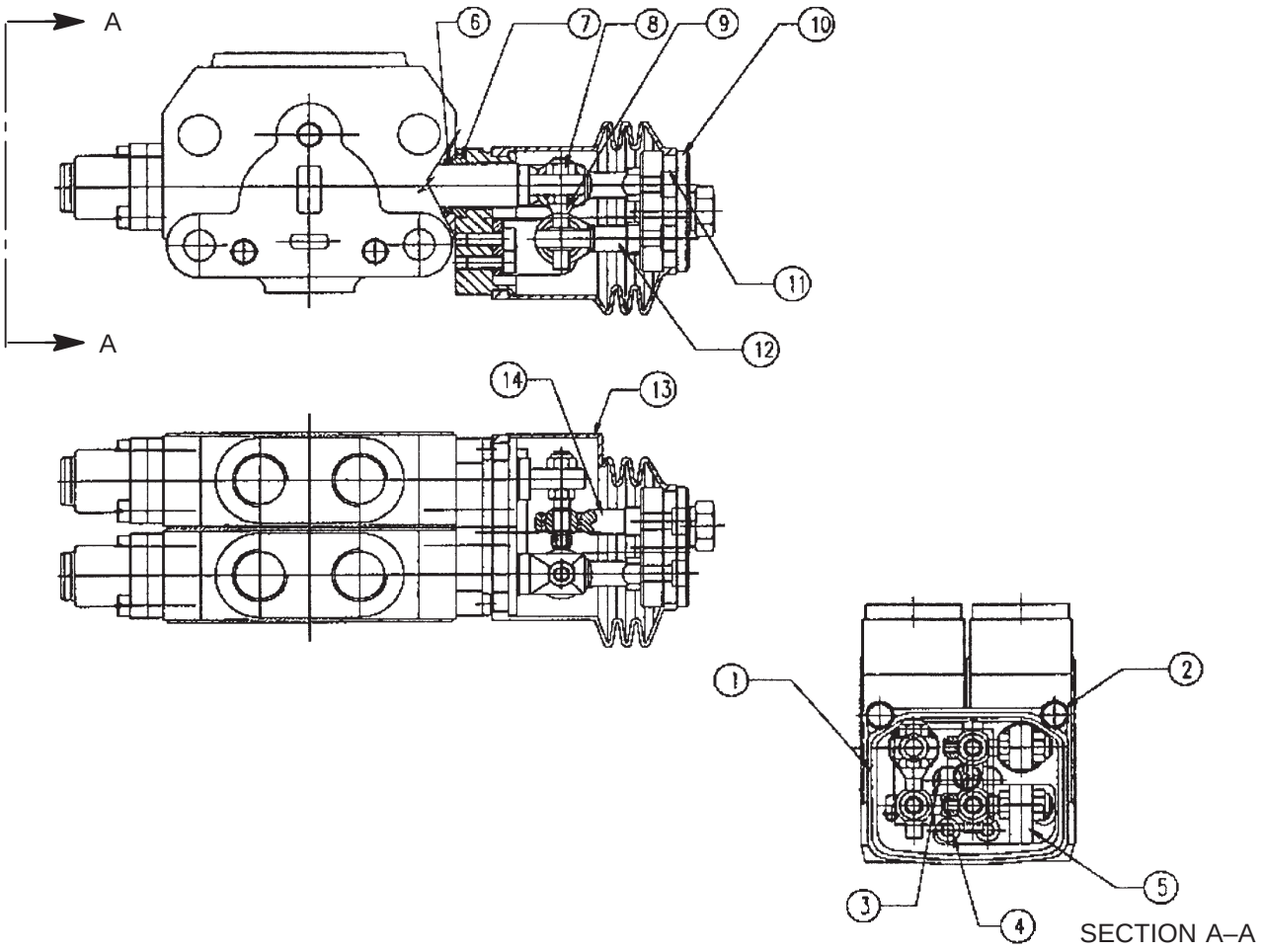
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52321205	1	SECTION, END	
2	52321213	7	SECTION, MIDDLE	
3	52321221	1	SECTION, END	
4	52321163	1	KIT, TIE ROD	
5	52321072	1	KIT, HANDLE	
			REFER TO PAGE 9.52–3	
6	52320934	3	KIT, CONTROL	
			REFER TO PAGE 9.52–4	
7	52321130	7	KIT, SPRING CENTERING	
8	52321171	1	SPOOL	
9	52321189	1	SPOOL	
10	52321197	5	SPOOL	
11	52321155	8	KIT, SECTIONAL SEAL (NOT ILLUSTRATED)	
12	52321148	7	KIT, LOAD CHECK VALVE	

52321072 HANDLE KIT



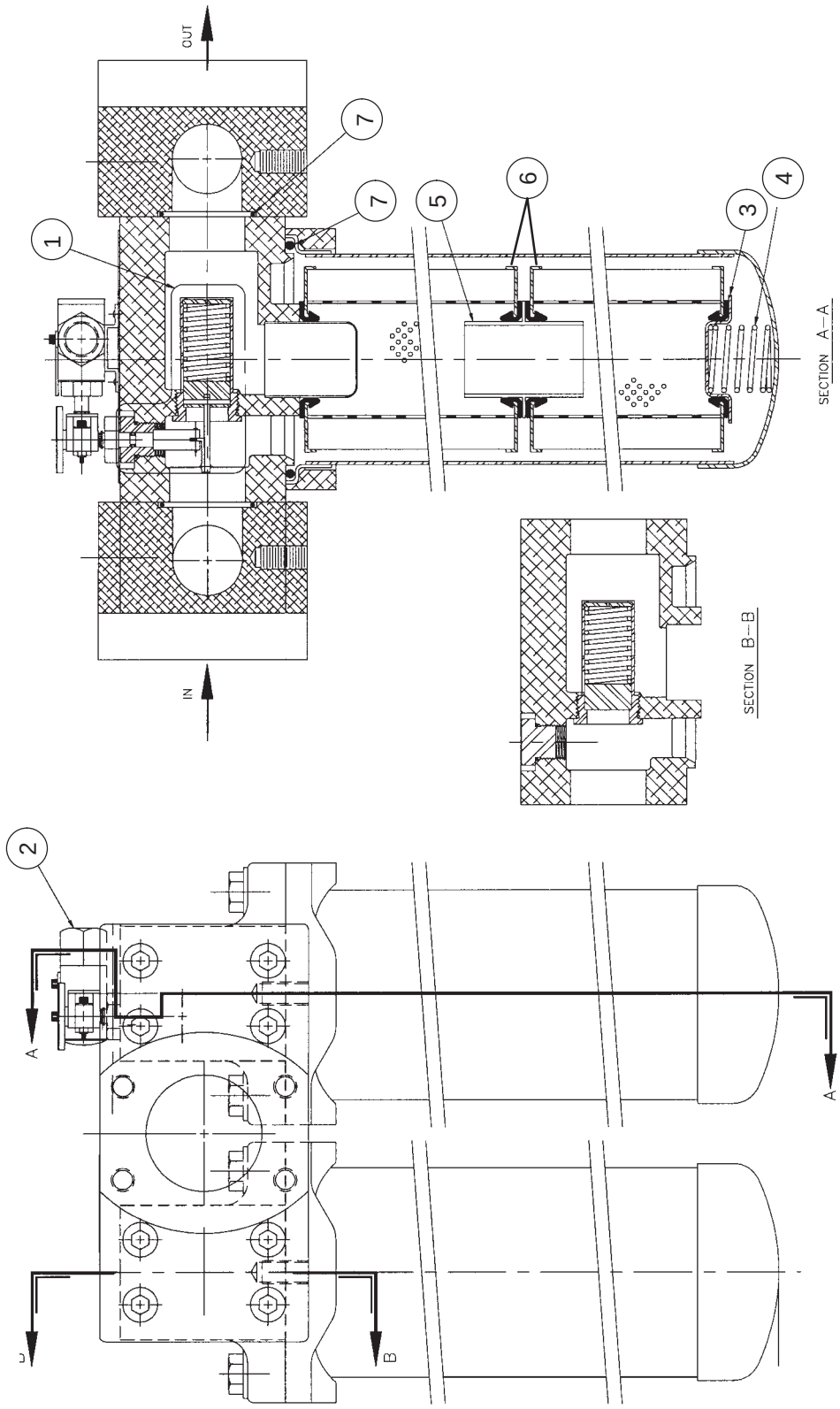
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52321114	1	BOOT, RUBBER	
2	52321106	1	PIN	
3	52321098	1	SUPPORT	
4	52321015	1	BUSHING	
5	95028536	1	O–RING	
6	52321080	4	CAPSCREW, ALLEN HD.	

52320934 CONTROL KIT



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52321064	1	FLANGE	
2	52321056	2	CAPSCREW, ALLEN HD.	
3	52321049	2	SCREW	
4	52321031	5	CAPSCREW, ALLEN HD.	
5	52321023	1	FLANGE	
6	95028536	2	O–RING	
7	52321015	2	BUSHING	
8	52321007	3	NUT	
9	52320991	1	PIN	
10	52320983	1	FLANGE	
11	52320975	4	CAPSCREW, ALLEN HD.	
12	52320967	1	PIN	
13	52320959	1	BELLOWS, RUBBER	
14	52320942	2	PIN	

52321338 HYDRAULIC RETURN FILTER

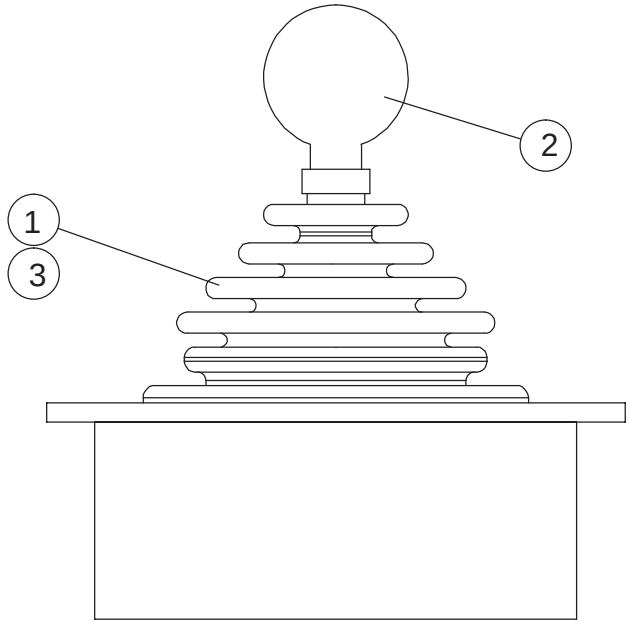


52321338 HYDRAULIC RETURN FILTER

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52321304	1	ASSEMBLY, BYPASS VALVE AND LINKAGE	
2	57435430	1	SWITCH, DIRT ALARM ELECTRICAL CAM OPERATED	
3	52321312	2	PLATE, COMPRESSION SPRING	
4	50709336	2	SPRING, COMPRESSION	
5	52321320	2	CONNECTOR, ELEMENT	
6	52321296	4	ELEMENT	
7	52321288	1	KIT, SEAL	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

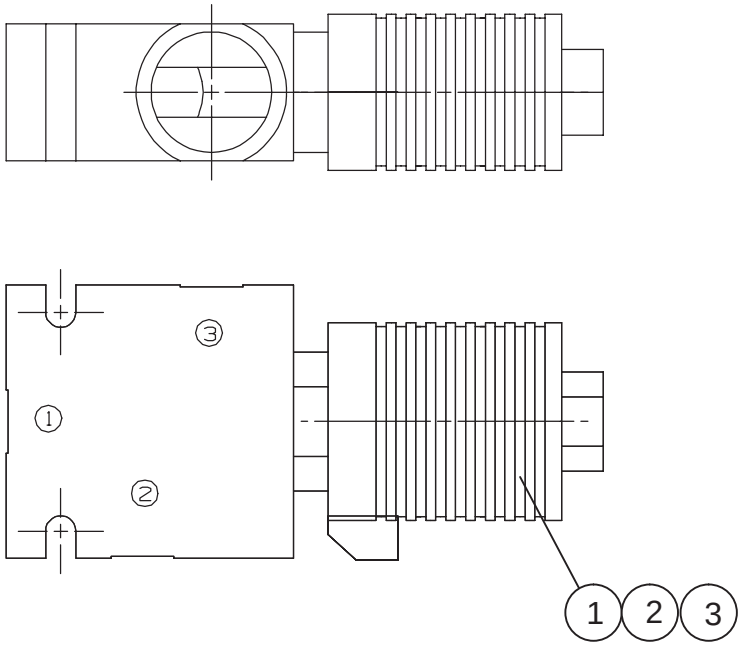
52330982 ROD LOCK/BREAKOUT FORK JOYSTICK



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52322344	1	BOOT	
2	52322351	1	BUSHING, BOOT	
3	52322385	1	CLAMP, BOOT	
	52322369	1	MICROSWITCH	

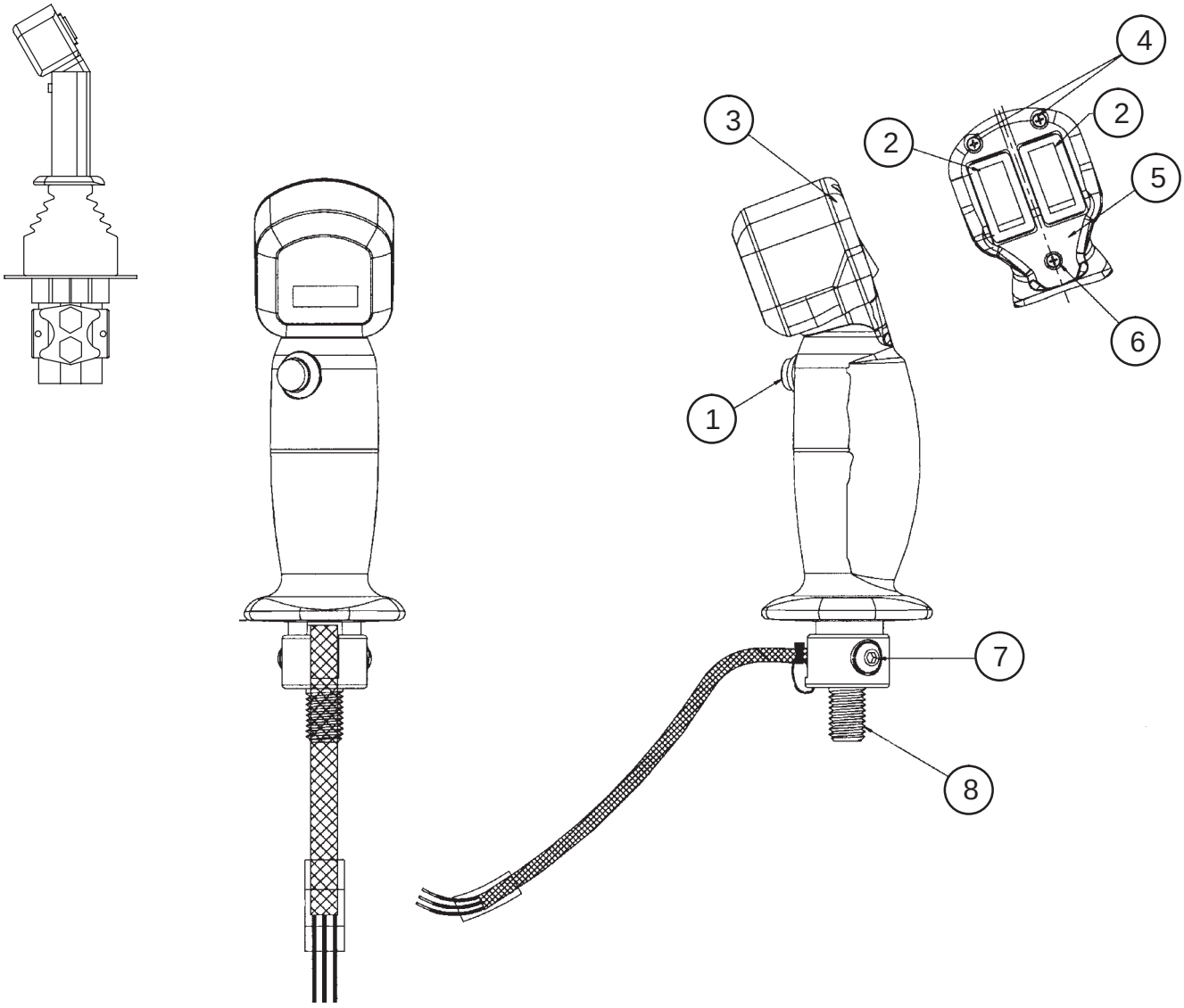
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52324910 LOAD SENSE SELECTOR VALVE



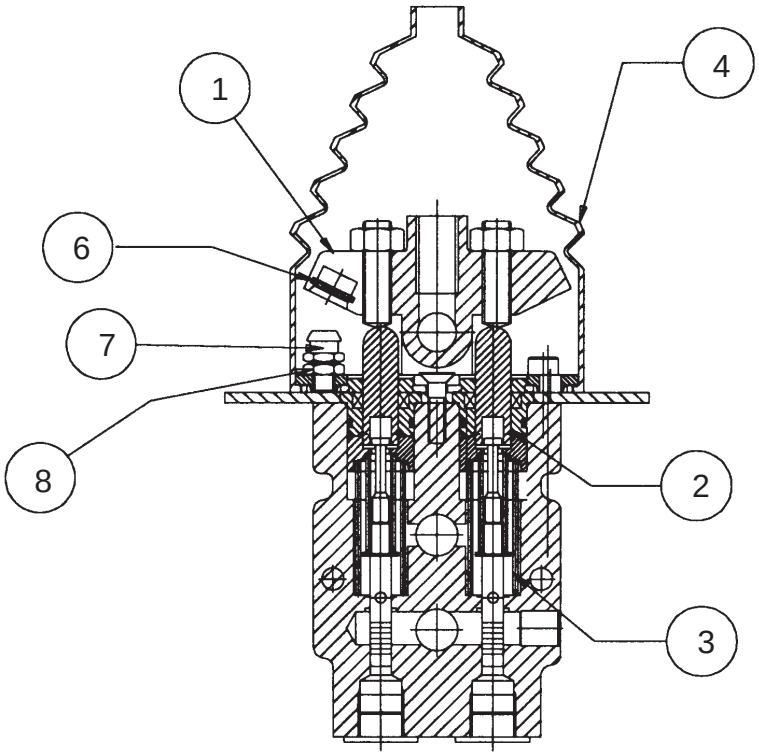
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51785889	1	COIL, 24V WITH CONNECTOR	
2	51776516	1	CARTRIDGE	
3	51776524	1	KIT, CARTRIDGE SEAL	

52324894 FEED FUNCTION CONTROL VALVE



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
	52326253	1	ASSEMBLY, FEED FUNCTION CONTROL VALVE HANDLE	
1	52322567	1	.SWITCH, GREEN	
2	52326238	2	.SWITCH, ROCKER	
3	52322575	1	.PLATE, BACK	
4	52325859	2	.SCREW	
5	52326246	1	.PLATE, FACE	
6	52325842	1	.SCREW	
7	52325875	1	.SCREW, LOCKING	
8	52325867	1	.ADAPTER, MOUNTING	

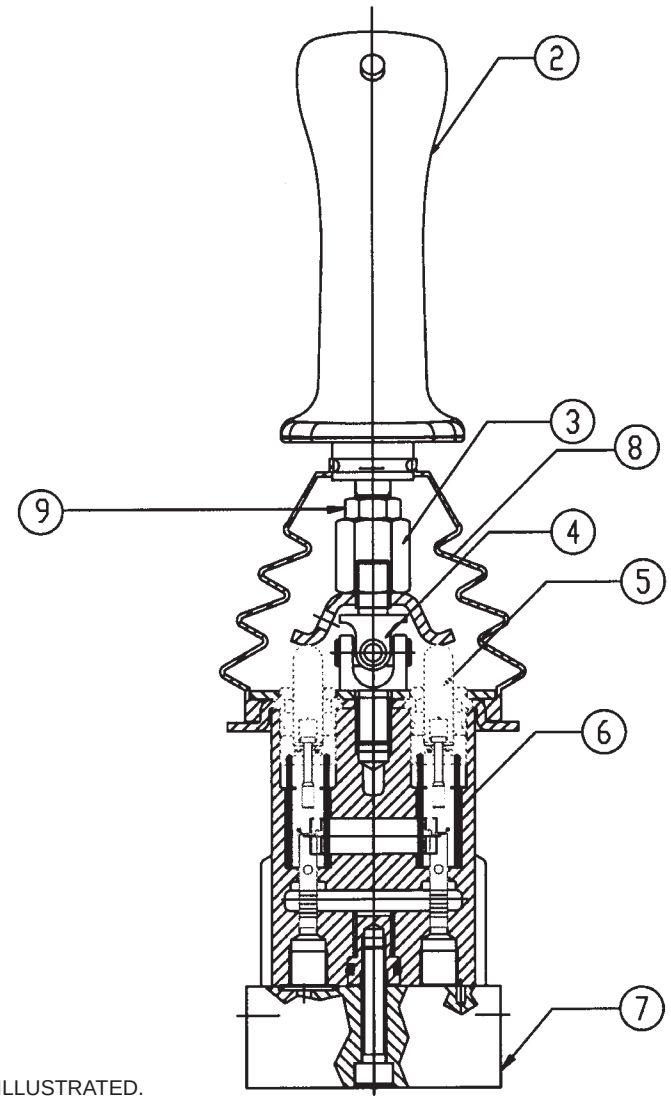
52324894 FEED FUNCTION CONTROL VALVE



NOTE: REFERENCE NO. 5 IS NOT ILLUSTRATED.

REF. NO.	*PART NO.*	*QTY.*	*PART NAME* / *REMARKS*	*SERIAL NO.*
	52325966	1	ASSEMBLY, MODE VALVE FUNCTION BODY	
1	52325958	1	.DETENT, POSITION ONE	
2	52325941	4	.CURVE, SPRING	
3	52325933	4	.SPRING, RETURN	
4	52325925	1	.BOOT	
5	52325917	1	.KIT, SEAL	
6	52325909	1	.CLIP, DETENT	
7	52325891	1	.STUD, DETENT	
8	52325883	1	.NUT	

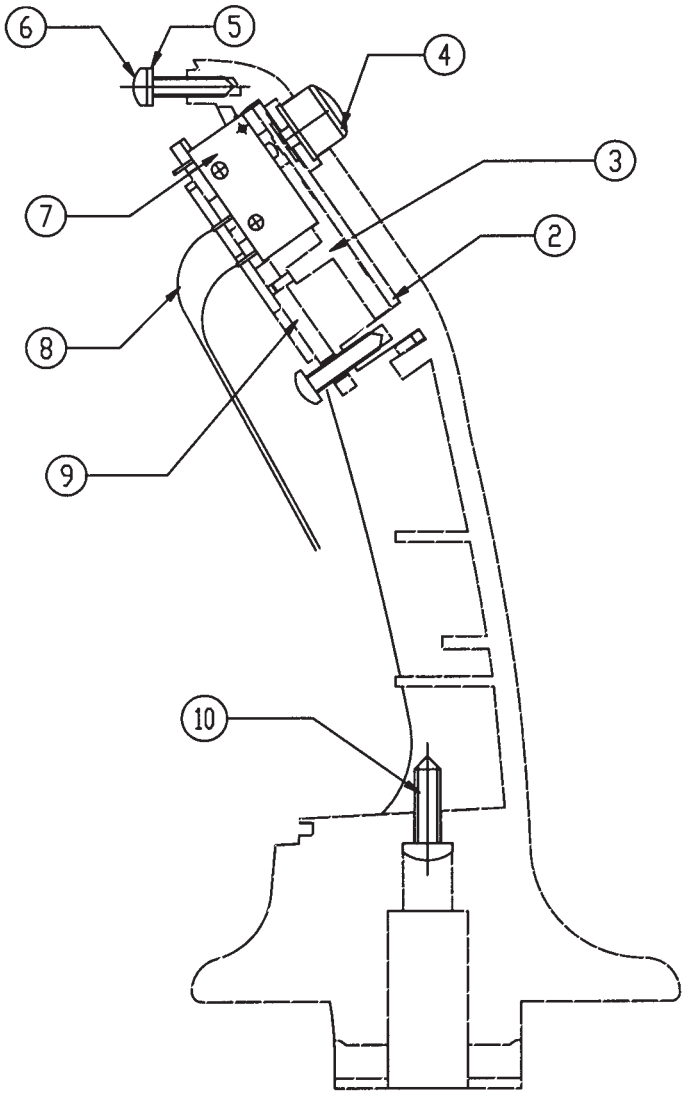
52311552 TRAM PILOT VALVE



NOTE: REFERENCE NO. 1 IS NOT ILLUSTRATED.

REF. NO.	*PART NO.*	*QTY.*	*PART NAME* / *REMARKS*	*SERIAL NO.*
1	52325982	1	KIT, SEAL	
2	52325990	1	HANDLE	
			REFER TO PAGE 9.60–2	
3	52326006	1	LEVER	
4	52326014	1	CONTROL	
5	52325941	4	CURVE, SPRING	
6	52325933	4	SPRING, RETURN	
7	52326022	1	BLOCK, SHUTTLE VALVE	
8	52326030	1	BOOT, RUBBER	

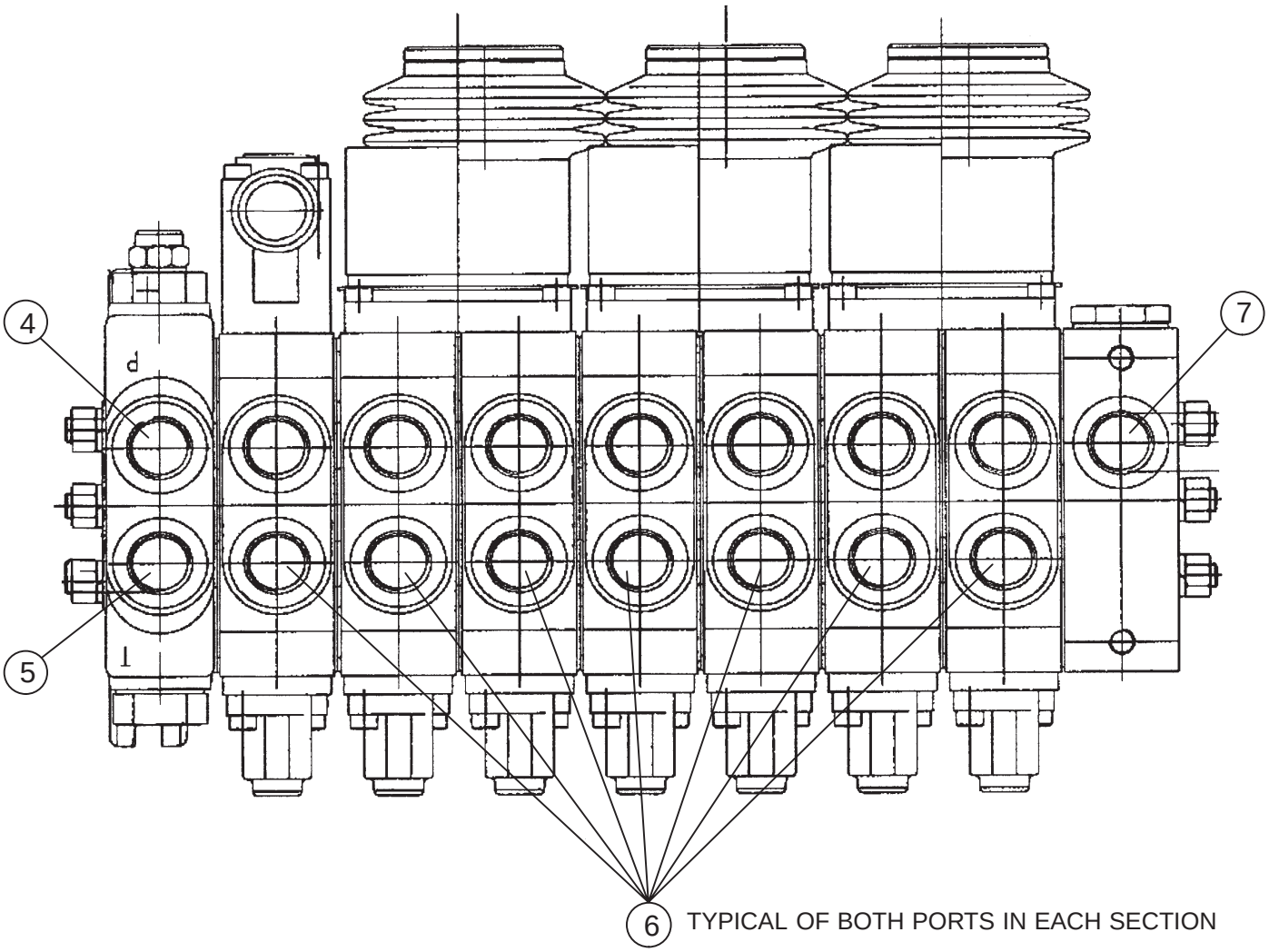
52325990 HANDLE



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
2	52326048	1	BUSHING	
3	52326055	1	SUPPORT	
4	52326063	1	SWITCH, YELLOW	
5	52326071	1	WASHER	
6	52326089	4	SCREW	
7	52326097	1	MICROSWITCH	
8	52326105	2	WIRE	
9	52326113	1	SUPPORT	
10	52326121	1	SCREW	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52314465 POSITIONING CONTROL VALVE ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52311537	1	VALVE, POSITIONING CONTROL *REFER TO PAGE 9.52–1*	
2	96727193	2	BOLT, FLANGED HD.	
3	96727797	2	BOLT, FLANGED HD.	
4	95527321	1	ADAPTER	
5	95303368	1	ADAPTER	
6	95356903	14	ADAPTER	
7	95748760	1	ADAPTER	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

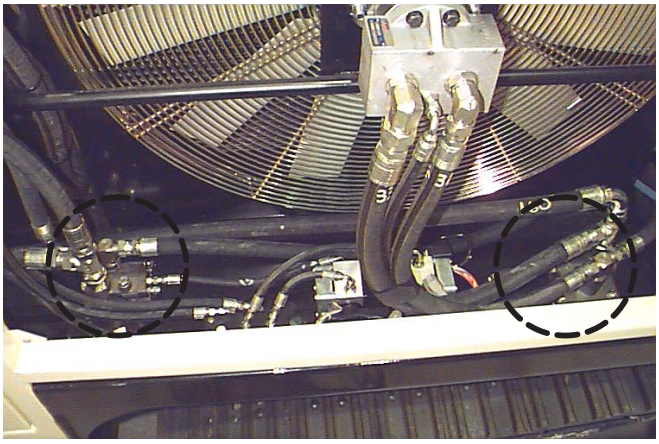
52329927 MANIFOLD ASSEMBLY, SLOW ROTATION

There is no drawing available at this time

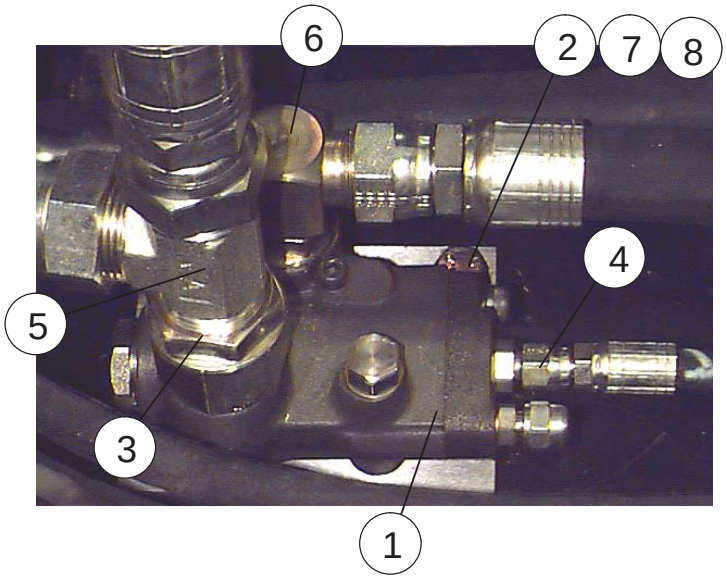
52329927 MANIFOLD ASSEMBLY, SLOW ROTATION

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52329620	1	CONTROL VALVE, SLOW ROTATION	
2	96714571	3	CAPSCREW	
3	96701289	3	WASHER	
4	95365094	1	ELBOW	
5	95371258	1	FITTING, HYD	

52318649 COOLER FAN VALVE ASSEMBLY



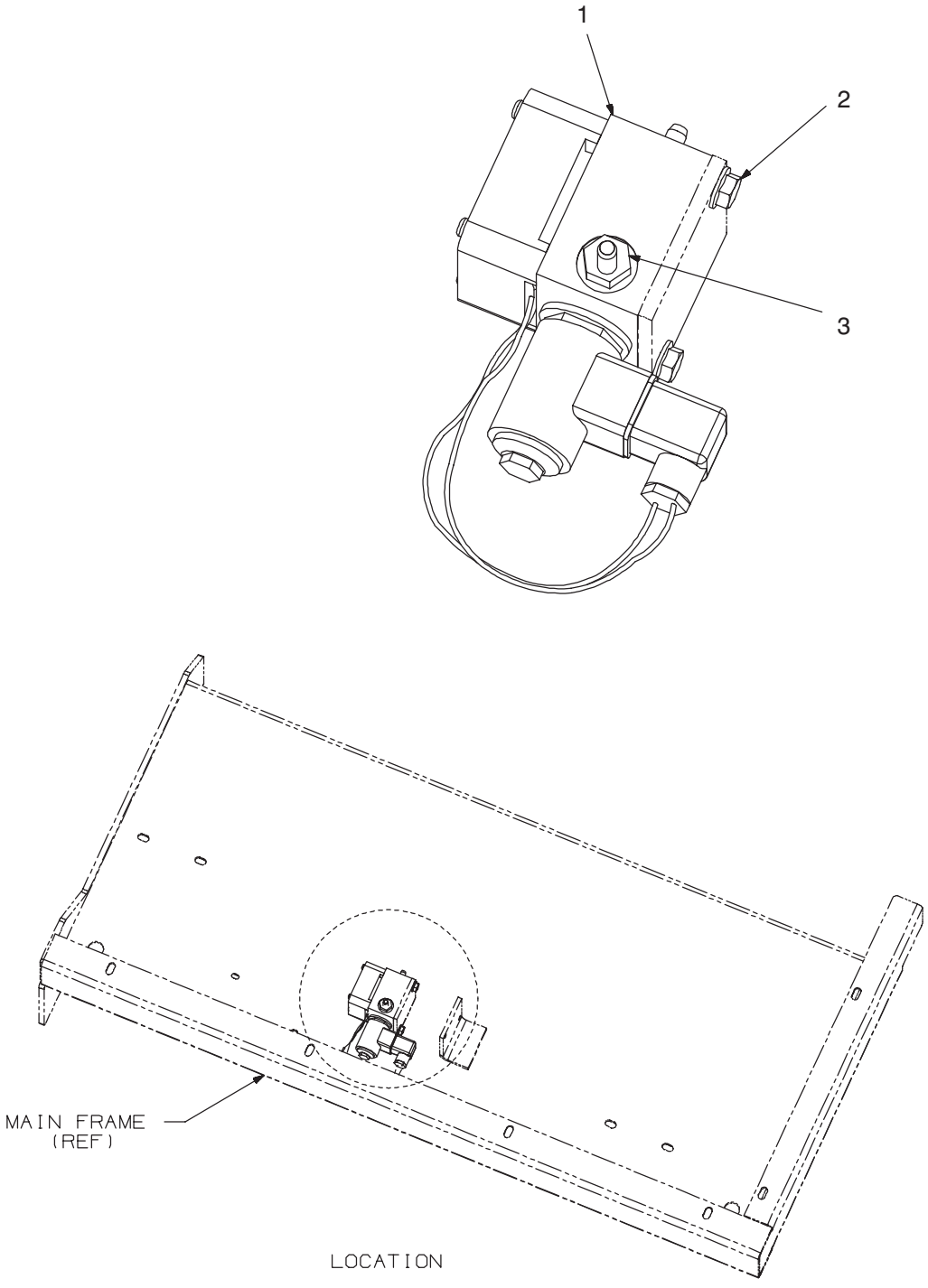
LOCATION



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52302015	1	VALVE, FAN CONTROL	
2	96719794	2	CAPSCREW	
3	95708301	1	ADAPTER	
4	52118841	1	ADAPTER	
5	95488110	1	ADAPTER, TEE	
6	52304862	1	ADAPTER, TEE	
7	96726807	2	LOCKNUT, FLANGED HD.	
8	96701982	2	WASHER, FLAT HD.	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model ECM720.

57736662 COOLER FAN CONTROL MODULE VALVE ASSEMBLY



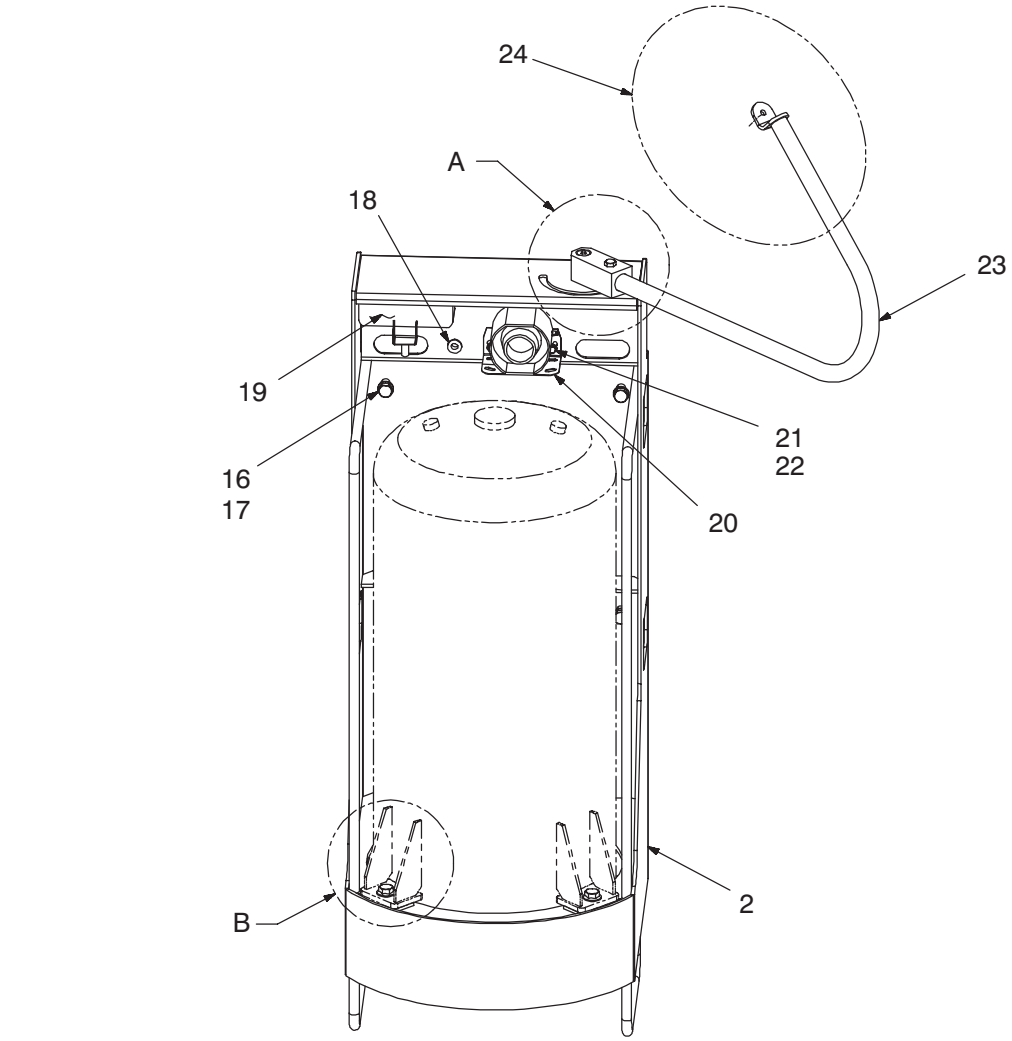
57736662 COOLER FAN CONTROL MODULE VALVE ASSEMBLY

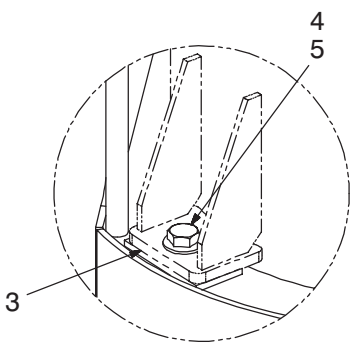
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57736621	1	VALVE, FAN CONTROL	
2	96727193	2	BOLT	
3	95371258	2	ADAPTER	

57699225 TANK, VAPOSOL ASSEMBLY (CE)

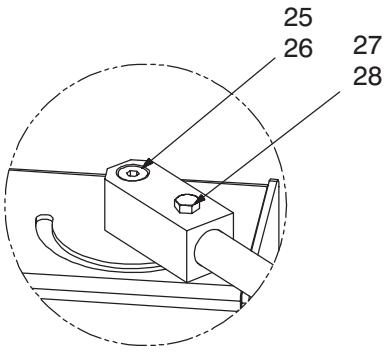
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
53	52316171	1	ASSEMBLY, VAPOSOL BRACKET *REFER TO PAGE 10.1–1*	
54	52327319	1	ASSEMBLY, VAPOSOL TANK (CE) *REFER TO PAGE 10.2–1*	
56	52327335	1	ASSEMBLY, VAPOSOL PUMP *REFER TO PAGE 10.3–1*	
57	52329596	1	ASSEMBLY, VAPOSOL STRAINER *REFER TO PAGE 10.6–1*	

52316171 VAPOSOL BRACKET ASSEMBLY





DETAIL – B



DETAIL – A

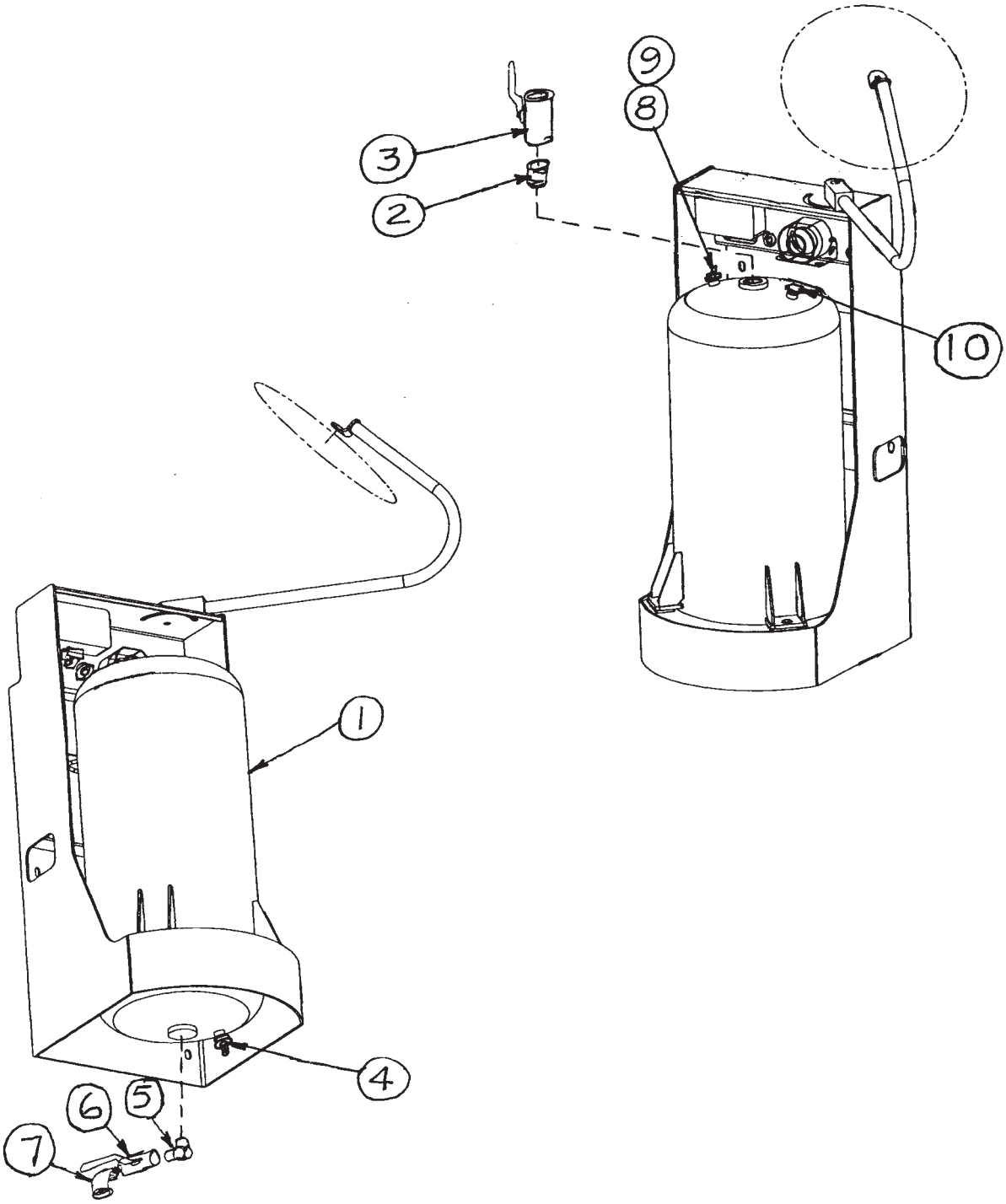
C52316171_01

52316171 VAPOSOL BRACKET ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
2	52314044	1	BRACKET, VAPOSOL MOUNTING	
3	52104767	3	PAD, ISOLATOR	
4	96726831	3	LOCKNUT, FLANGED HD.	
5	96727391	3	BOLT, FLANGED HD.	
16	96703186	6	BOLT, HEX. HD.	
17	96702550	6	WASHER, FLAT	
18	50882281	1	GROMMET	
19	51789220	1	LIGHT, BACK	
20	51857324	1	ALARM, BACKUP	
21	96727193	2	BOLT, FLANGED HD.	
22	96726799	2	LOCKNUT, FLANGED HD.	
23	52307436	1	BRACKET, MIRROR MOUNTING	
24	51776961	1	MIRROR, REAR	
25	95366555	1	SCREW. SOC. HD. SHOULDER	
26	95943072	1	LOCKNUT, HEX. HD.	
27	96714050	1	BOLT, HEX. HD.	
28	96726815	1	LOCKNUT, FLANGED HD.	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

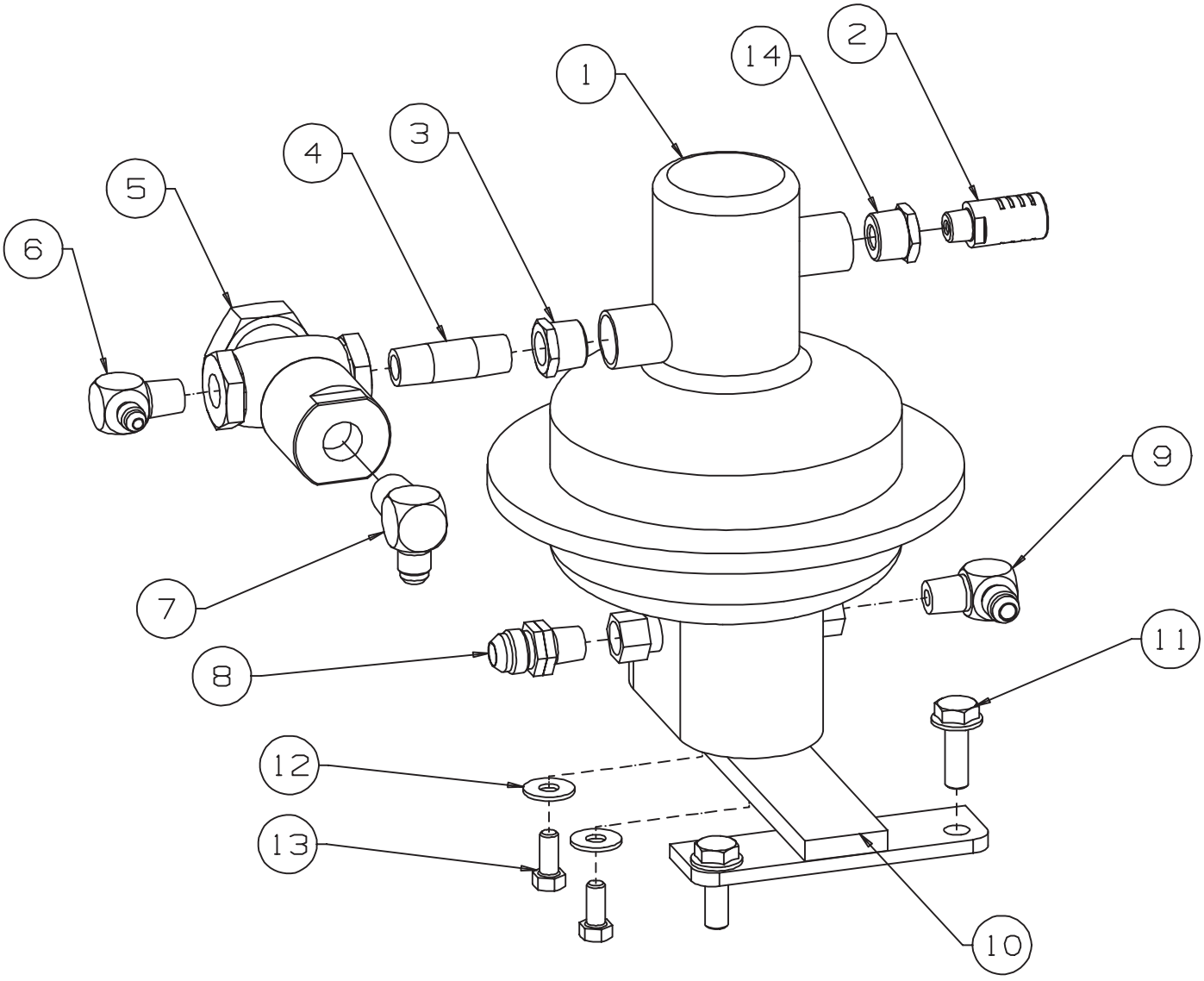
52327319 VAPOSOL TANK ASSEMBLY (CE)



52327319 VAPOSOL TANK ASSEMBLY (CE)

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52104742	1	TANK, VAPOSAL	
2	95097333	1	NIPPLE	
3	50963735	1	VALVE, BALL (2”)	
4	95279535	1	ADAPTER	
5	95317434	1	ADAPTER	
6	50788207	1	VALVE, BALL	
7	95030771	1	ELBOW, 90 DEGREE STREET	
8	95037412	1	BUSHING, REDUCING	
9	03692076	1	PLUG, VENT	
10	95730545	1	PLUG	

52327335 VAPOSOL PUMP ASSEMBLY

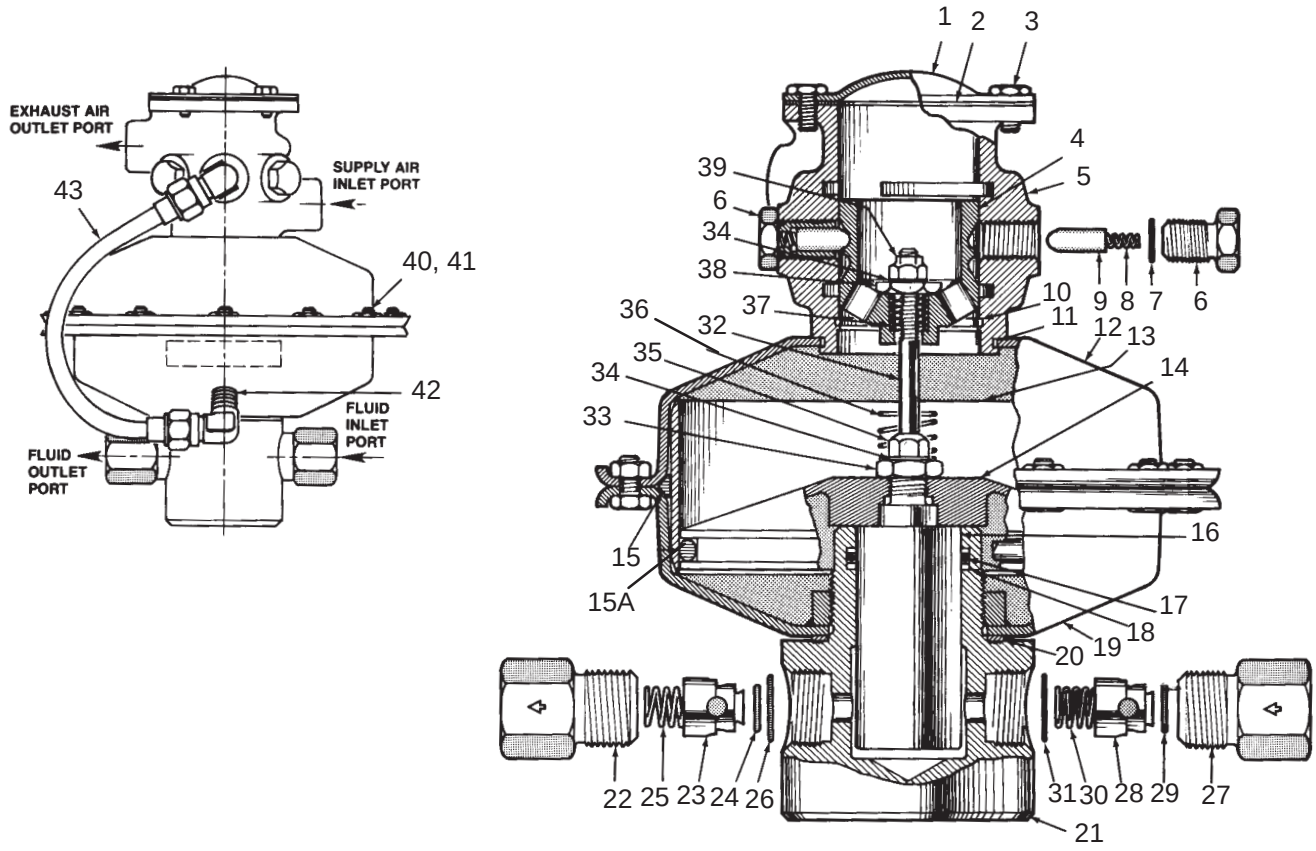


52327335 VAPOSOL PUMP ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52286036	1	PUMP, VAPOSOL	
			REFER TO PAGE 10.4–1	
2	36766731	1	MUFFLER, ORIFICED	
3	95037347	1	BUSHING	
4	95243002	1	NIPPLE	
5	50139377	1	VALVE, PILOT	
			REFER TO PAGE 10.5–1	
6	95335980	1	ADAPTER	
7	95279527	1	ADAPTER	
8	95263398	1	FITTING	
9	95279493	1	ADAPTER	
10	52327327	1	BRACKET, VAPOSOL PUMP MOUNTING	
11	96727003	2	CAPSCREW	
12	95064671	2	WASHER, PLAIN	
13	95101804	2	CAPSCREW	
14	95037412	1	BUSHING	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52286036 VAPOSOL AIR PUMP ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	50085745	1	COVER	
2	50137728	1	GASKET	
3	50495696	4	CAPSCREW	
	51069110	1	ASSEMBLY, AIR VALVE/HOUSING	
4	++	1	.VALVE	
5	++	1	.BODY	
6	50084771	4	.BOLT	
7	50084789	4	.O–RING	
8	50084755	4	.SPRING	
9	50457365	4	.PIN	
10	50370998	1	.STOP	
11	++	1	.GASKET	
12	++	1	.HOUSING	

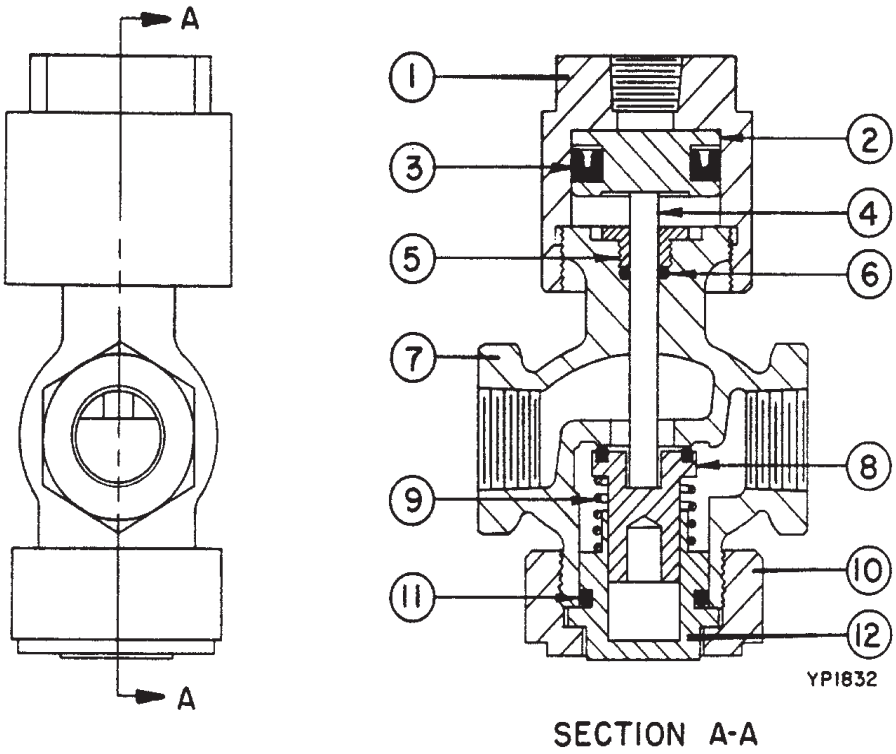
52286036 VAPOSOL AIR PUMP ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
13	50137694	1	CYLINDER	
14	50088129	1	PISTON	
15	50090190	1	O–RING	
15A	52290889	1	SEAL	
16	51069136	1	PISTON	
17	50087618	1	PACKING	
18	50090182	2	RING, BACKUP	
	51069144	1	ASSEMBLY, BODY/HOUSING	
19	++	1	.HOUSING, LOWER	
20	++	1	.GASKET	
21	++	1	.BODY	
	51069177	1	ASSEMBLY, OUTLET VALVE	
22	++	1	.BODY, CHECK VALVE	
23	51069201	1	.ASSEMBLY, POPPET	
	++	1	..POPPET	
24	51069227	1	..PACKING, O–RING	
25	50091297	1	.SPRING	
26	52261294	1	.O–RING	
	51069185	1	ASSEMBLY, INLET VALVE	
27	++	1	.BODY, CHECK VALVE	
28	51069201	1	.ASSEMBLY, POPPET	
	++	1	..POPPET	
29	51069227	1	..PACKING, O–RING	
30	50091297	1	.SPRING	
31	52261294	1	.O–RING	
32	50088095	1	ROD, CONNECTING	
33	51069235	1	NUT	
34	50718238	2	LOCKWASHER	
35	50091008	1	NUT, SHIFTING	
36	50137702	1	SPRING	
37	50454560	1	SPRING	
38	50092923	1	NUT	
39	50718246	1	NUT	
40	50495696	12	CAPSCREW	
41	51069243	12	NUT	
42	50100593	2	ELBOW	
43	51069250	1	ASSEMBLY, TUBE	

++ **NOTE:** THESE PARTS ARE NOT SOLD SEPARATELY.

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

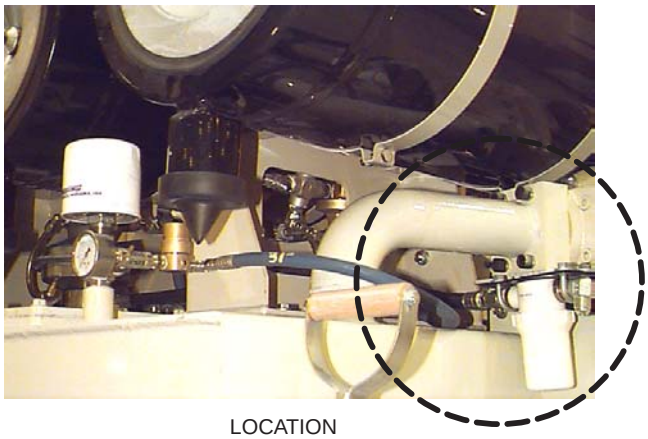
50139377 VAPOSOL PUMP PILOT VALVE



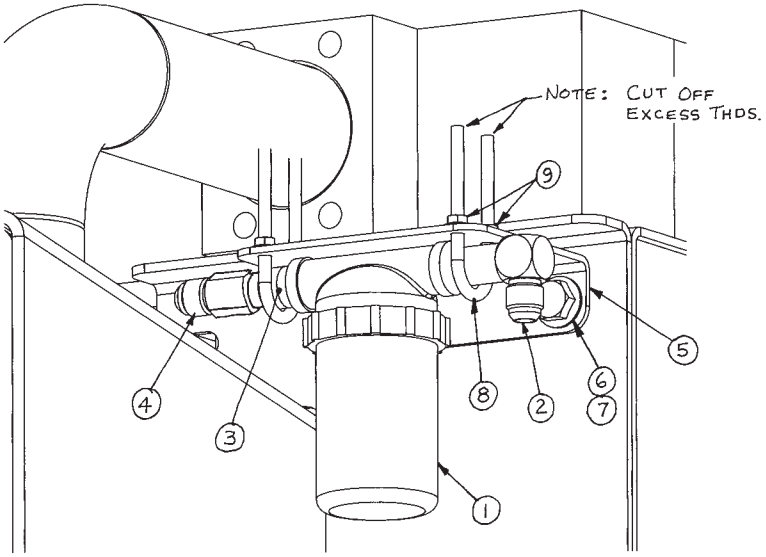
SECTION A-A

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	50550938	1	CAP, PILOT	
2	50550920	1	PISTON	
3	50098839	1	U–CUP	
4	50550904	1	PIN	
5	50373745	1	GLAND	
6	50098821	1	O–RING	
7	50710698	1	BODY	
8	50097765	1	POPPET	
9	50097773	1	SPRING	
10	50550946	1	NUT	
11	50098813	1	O–RING	
12	50097732	1	GUIDE	

52329596 VAPOSOL STAINER ASSEMBLY



LOCATION



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51033298	1	STRAINER, VAPOSOL	
2	56901200	1	ADAPTER	
3	95209862	1	NIPPLE	
4	95386959	1	ADAPTER	
5	52329727	1	BRACKET, VAPOSOL STRAINER	
6	96727177	2	CAPSCREW	
7	96727730	2	NUT, HEX. FLANGED	
8	95822458	2	U-BOLT	
9	95116869	4	NUT, HEX	

57699233 DUST COLLECTOR ASSEMBLY, 780

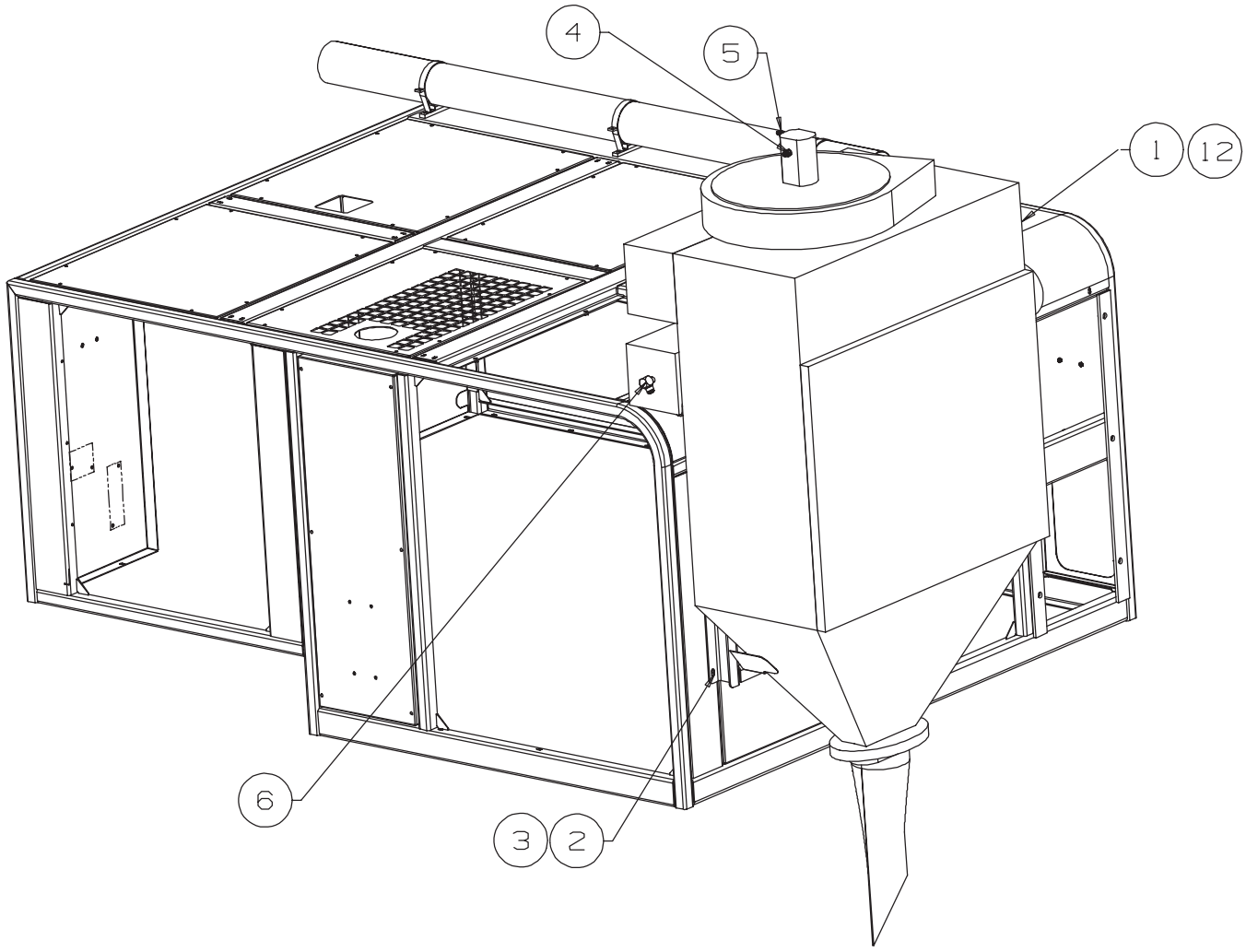
NO DRAWING AVAILABLE AT THIS TIME

57699233 DUST COLLECTOR ASSEMBLY, 780

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
55	52329638	1	SEPARATOR ASM, DUST COLL. *REFER TO PAGE 10.10–1*	
58	52316338	1	DUST COLLECTOR INSTL *REFER TO PAGE 10.8–1*	
59	57727059	1	ASSY, PICK–UP POT *REFER TO PAGE 10.11–1*	
60	57738304	1	VALVE, DUST COLL MTR *REFER TO PAGE 9.13–1*	

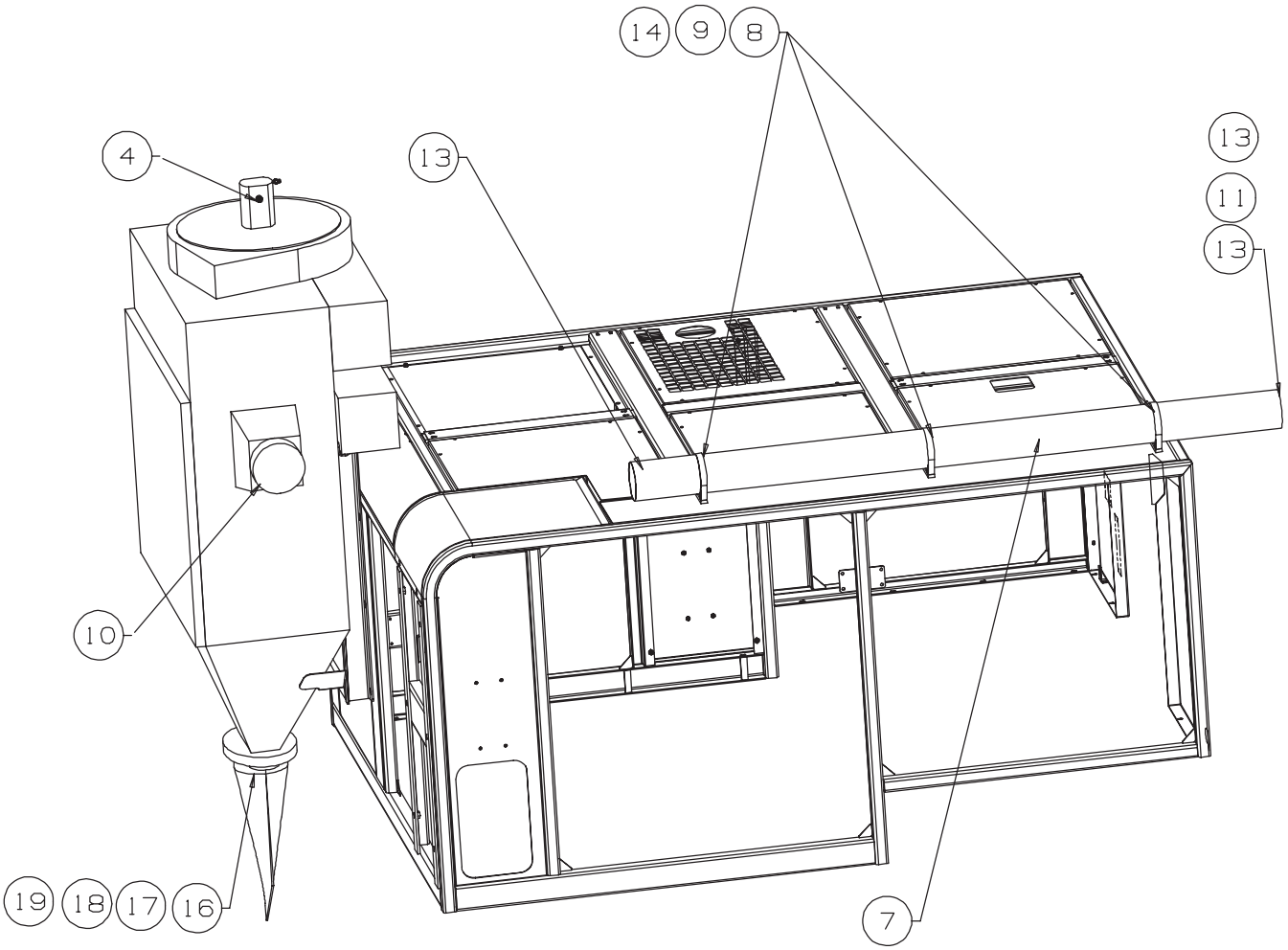
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52316338 DUST COLLECTOR INSTALLATION



52316338_00

52316338 DUST COLLECTOR INSTALLATION



52316338 DUST COLLECTOR INSTALLATION

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52316288	1	COLLECTOR, DUST *REFER TO PAGE 10.9–1*	
2	96703178	6	CAPSCREW, HEX. HD.	
3	96702550	6	WASHER, FLAT	
4	95303368	2	ADAPTER	
5	95402806	1	ADAPTER	
6	95279543	1	ADAPTER	
7	52327533	1	TUBE, DUST COLLECTOR	
8	50931971	3	STRAP, MTG	
9	51989572	6	BOLT, FLANGED HD.	
10	52329752	1	HOSE, DUST COLLECTOR	
11	52329760	1	HOSE, DUST COLLECTOR	
12	57714388	3	FILTER, DUST COLLECTOR	
13	52329778	3	CLAMP, DOUBLE BOLT	
14	52321395	3	SPACER	
16	51785962	1	HOSE, DUMP	
17	51785988	1	CLAMP	
18	51785970	1	WINDSCREEN, DUST COLLECTOR	
19	52284825	1	BAND, MOUNTING, WINDSCREEN	

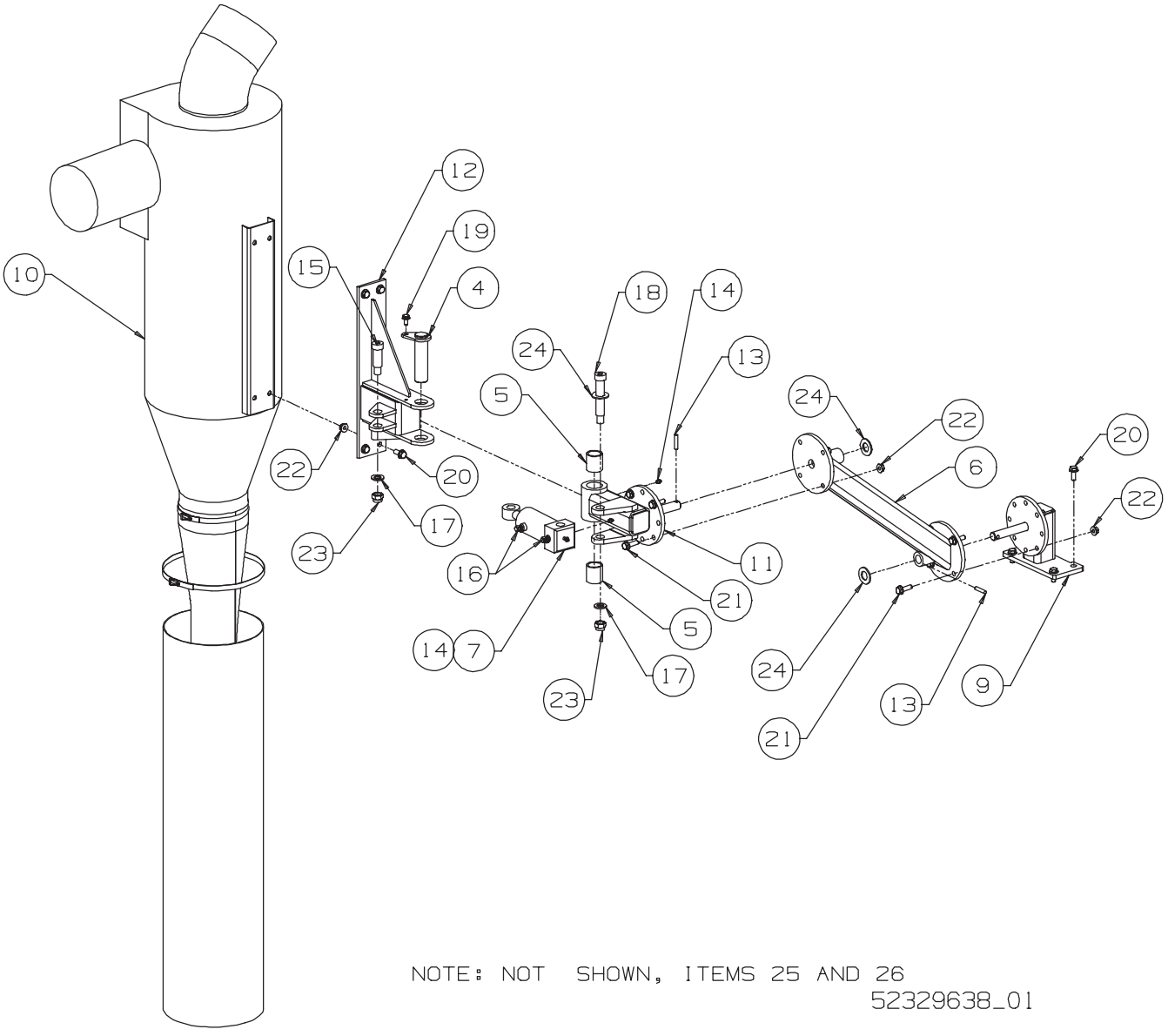
52316288 DUST COLLECTOR

NO DRAWING AVAILABLE AT THIS TIME

52316288 DUST COLLECTOR

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52327095	3	VALVE, DIAPHRAGM	
	51793370		.KIT, DIAPHRAGM VALVE REPAIR	
2	52327103	3	O–RING, DIAPHRAGM VALVE	
3	52327111	3	VALVE, SOLENOID	
	51874550		.KIT, SOLENOID VALVE REPAIR	
4	52327228	1	CORD, POWER CONNECTION	
5	52331469	1	HARNESS, SOLENOID VALVE WIRING	
6	52327137	1	MANIFOLD, AIR	
7	95048971	1	NIPPLE	
8	51793404	1	DRAINCOCK	
11	52304508	1	MOTOR, FAN	
12	52331501	1	COVER, FAN HSG/CABINET	
13	52331519	1	WHEEL, FAN	
14	52331527	1	PLATE, FAN MOTOR	
15	52327160	1	DOOR, CABINET	
16	51793438	3	NUT, DOOR WING	
17	52327178	1	RUBBER, INSIDE CABINET WEAR PLATE	
18	52331535	1	INLET, DC(8”)	
19	52327194	1	BOX, TIMER	
20	51793461	1	CARD, TIMER	
	52130960	1	.FUSE, TIMER	
21	52327202	1	COVER, TIMER BOX	
22	52327210	1	COVER, MANIFOLD	
23	52331477	1	BRACKET, FILTER	

52329638 SEPARATOR ASM, DUST COLL.

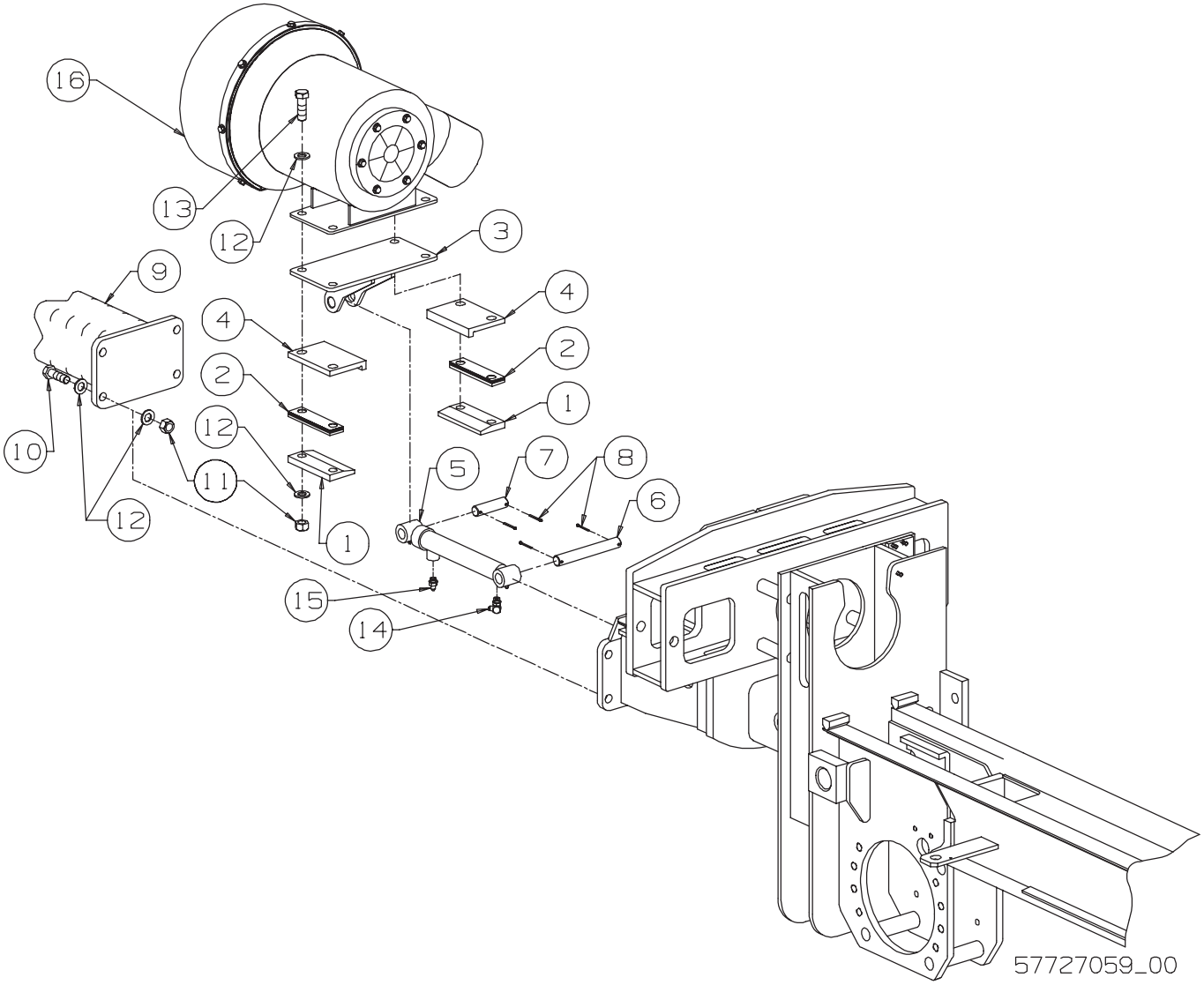


52329638 SEPARATOR ASM, DUST COLL.

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
4	52091493	1	SEPARATOR, PIN	
5	52093168	2	BEARING,SLEEVE	
6	52115524	1	ARM, PIVOT SEPARATOR	
7	52132875	1	CYL. GRIPPER ARM	
9	52298809	1	SUPPORT, SEPARATOR	
10	52329646	1	SEPARATOR, DUST COLLECTOR	
11	52329653	1	BRACKET, SEPARATOR	
12	52330057	1	PIVOT, SEPARATOR	
13	95098703	2	PIN, ROLL	
14	95201281	3	FITTING, HYD. LUBE	
15	95234902	1	SCREW	
16	95653614	2	ADAPTER	
17	95935011	2	WASHER	
18	95957643	1	SCREW, SHOULDER	
19	96727169	1	BOLT	
20	96727177	4	BOLT	
21	96726740	7	BOLT	
22	96727730	11	NUT, FLANGE	
23	95923447	2	NUT,LOCK	
24	95081642	3	WASHER, FLAT, WIDE	
25	52329745	1	HOSE, DUST COLLECTOR	
26	52329778	2	CLAMP, DOUBLE BOLT	
27	96703152	4	CAPSCREW	
28	96700968	4	WASHER, FLAT	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57727059 PICK–UP POT ASM

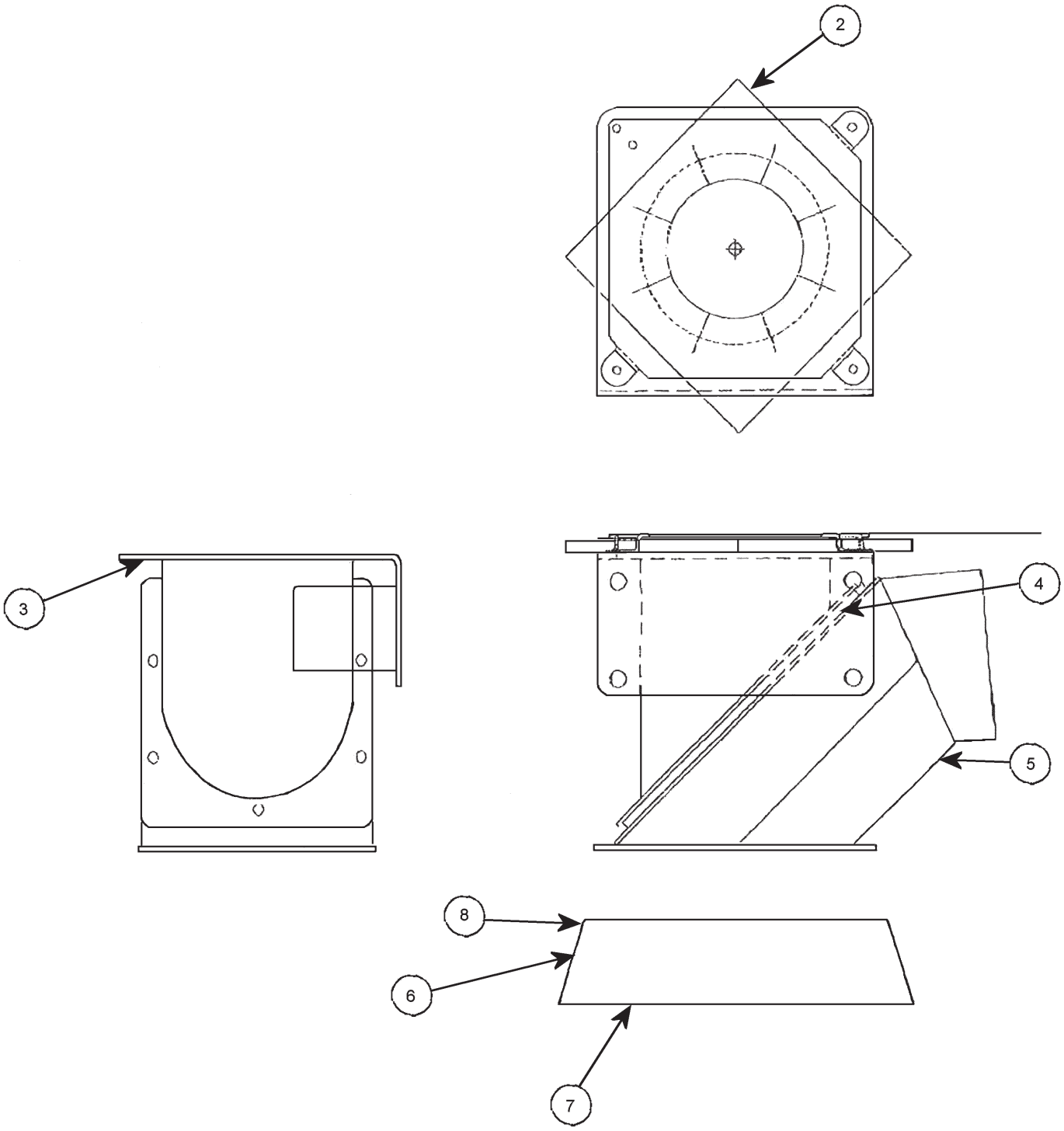


57727059 PICK–UP POT ASM

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51779163	2	CLAMP	
2	51779171	2	PACK, SHIM	
3	51779114	1	SLIDE, DUSTHOOD WELDMENT	
4	51779155	2	PAD, WEAR HYD. CENTRALIZER	
5	51989564	1	CYL, DUSTHOOD	
6	51779361	1	PIN, CYLINDER	
7	51779379	1	PIN, CYLINDER	
8	95002705	4	PIN, COTTER	
9	51909067	1	FOOT, STINGER, 12 IN.	
10	96701867	4	CAPSCREW	
11	96727136	8	NUT	
12	96700976	16	WASHER	
13	96703350	4	CAPSCREW	
14	95365094	3	ELBOW	
15	95371258	2	FITTING, HYD	
16	52331089	1	DUSTPOT	

REFER TO PAGE 10.12–1

52331089 DUST POT



52331089 DUST POT

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57701880	1	DEFLECTOR, PUP, 8”	
2	57701898	1	SEAL, TOP, 4”	
3	52331584	1	SECTION, UPPER, DUSTPOT	
4	57703704	1	GASKET, INTERMEDIATE 4”	
5	52331592	1	SECTION, LOWER DUSTPOT	
6	57703712	1	SHIRT, RUBBER W/RETAINERS	
7	57703720	1	WASHER, RETAINER, SKIRT	

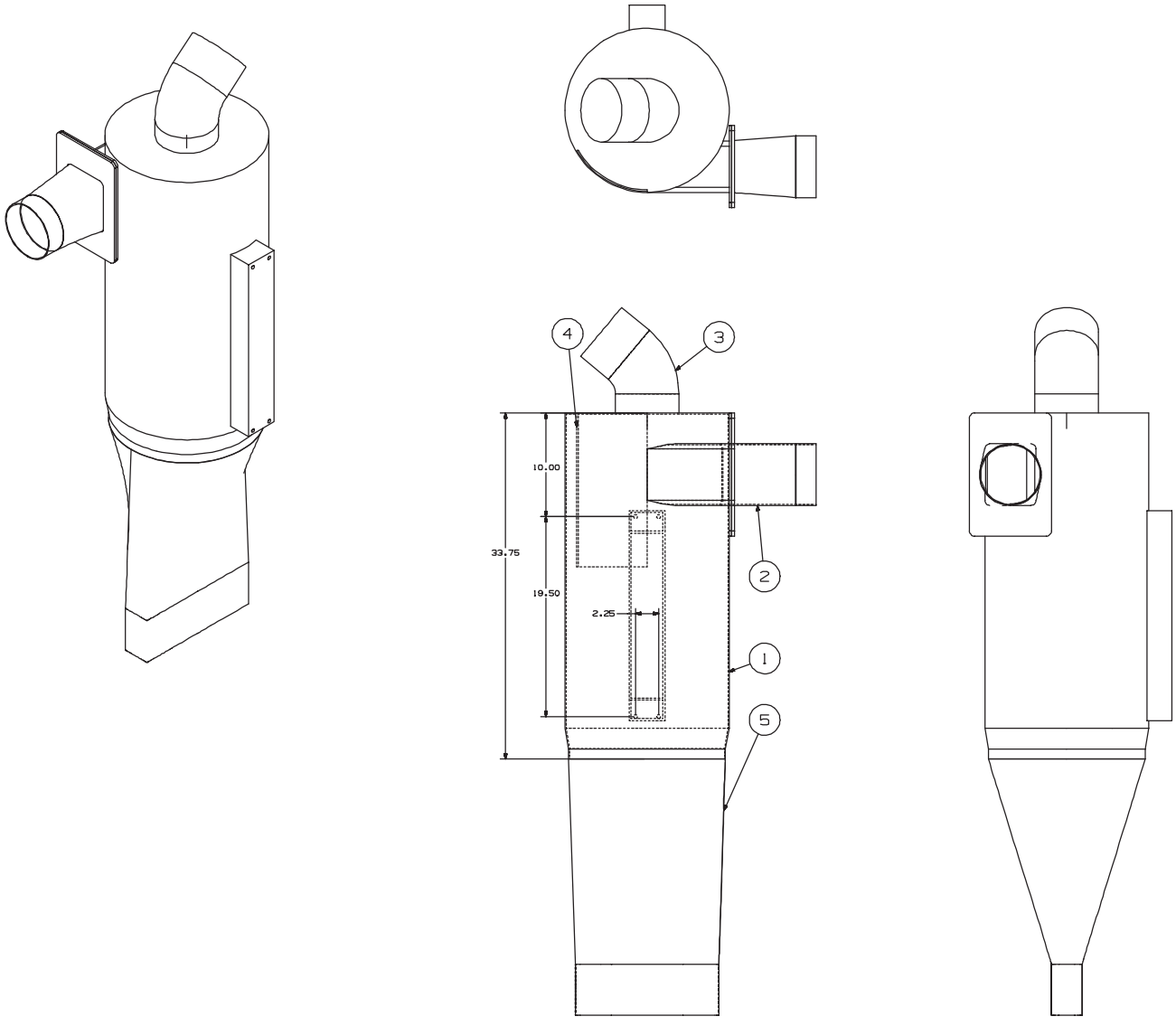
57733651 VAPOSOL TANK ASSEMBLY W/O TANK

NO DRAWING AVAILABLE AT THIS TIME

57733651 VAPOSOL TANK ASSEMBLY W/O TANK

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57708711	1	BRACKET, MOUNTING	
2	96703186	6	CAPSCREW	
3	96702550	6	WASHER	
4	50882281	1	GROMMET	
5	51789220	1	LAMP	
6	51857324	1	ALARM, BACKUP ASSY	
7	96726799	2	NUT	
8	52307436	1	BRACKET, MIRROR	
9	51776961	1	MIRROR, CONVEX	
10	95366555	1	SCREW	
11	95943072	1	NUT	
12	96714050	1	BOLT	
13	52327335	1	PUMP,VAPOSOL ASSEMBLY	
14	52329596	1	STRAINER,VAPOSOL ASM	
15	95257325	1	CAP	

52328646 SEPARATOR, DUST COLLECTOR



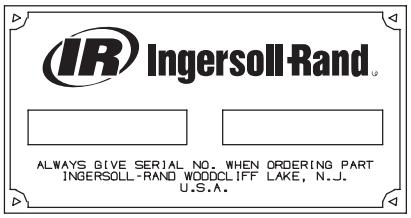
52329646_00

52328646 SEPARATOR, DUST COLLECTOR

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57742892	1	BODY	
2	57742884	1	INLET	
3	57742876	1	OUTLET	
4	57742868	1	PLATE, INTERNAL WEAR	
5	57742850	1	HOSE, DISCHARGE	

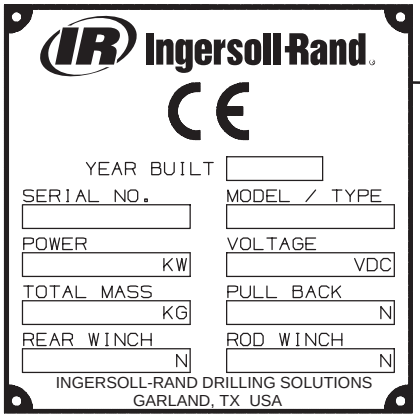
57677999 DECAL & NAMEPLATE ASSEMBLY

8 10



FOR ASME MACHINES

9 10



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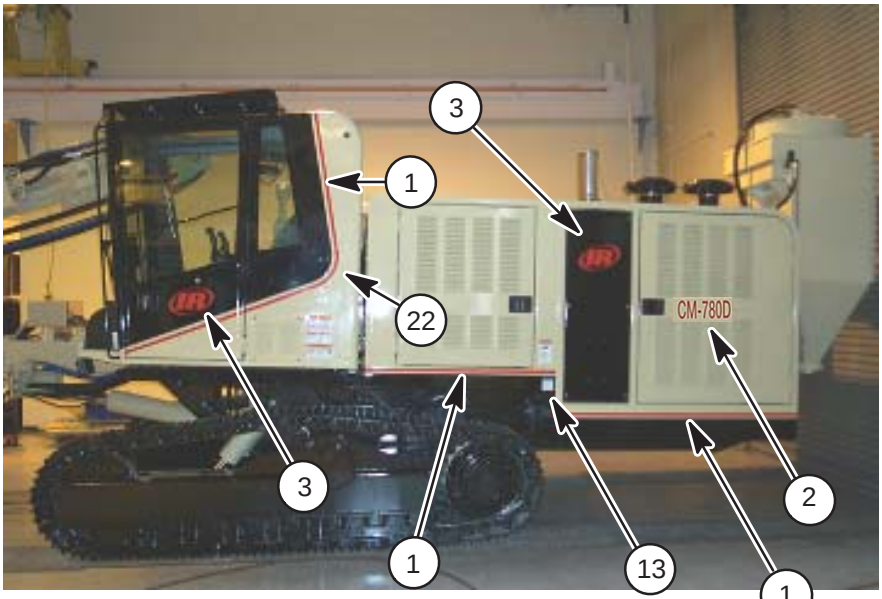
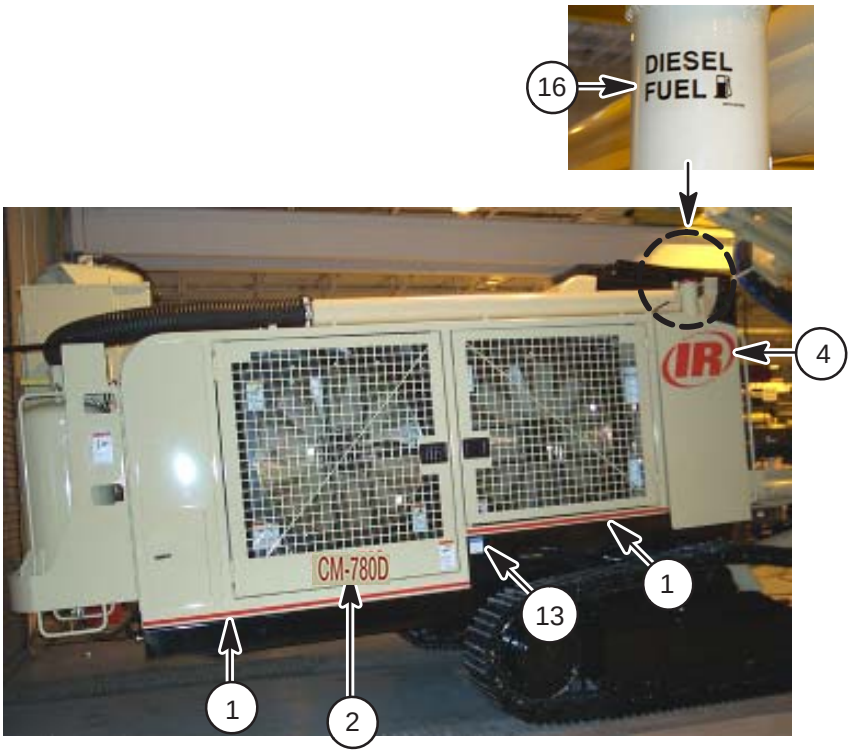
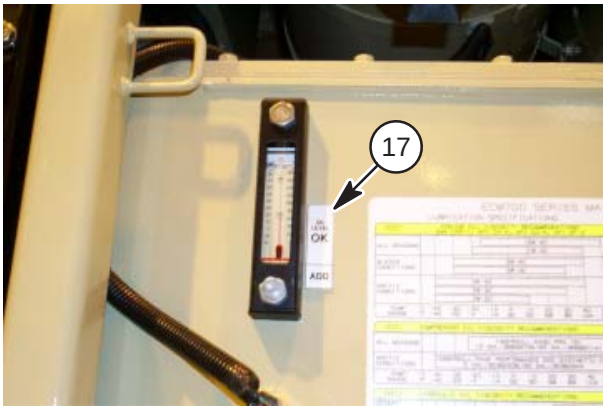


57677999 DECAL & NAMEPLATE ASSEMBLY





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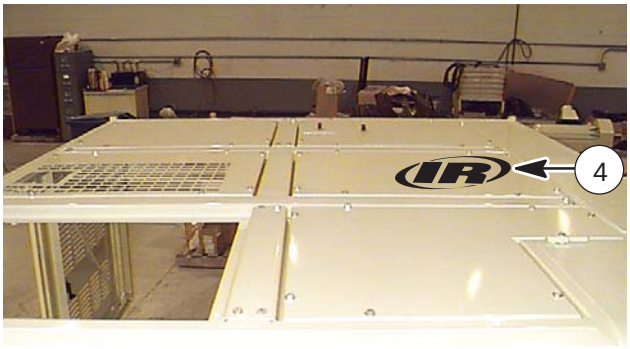
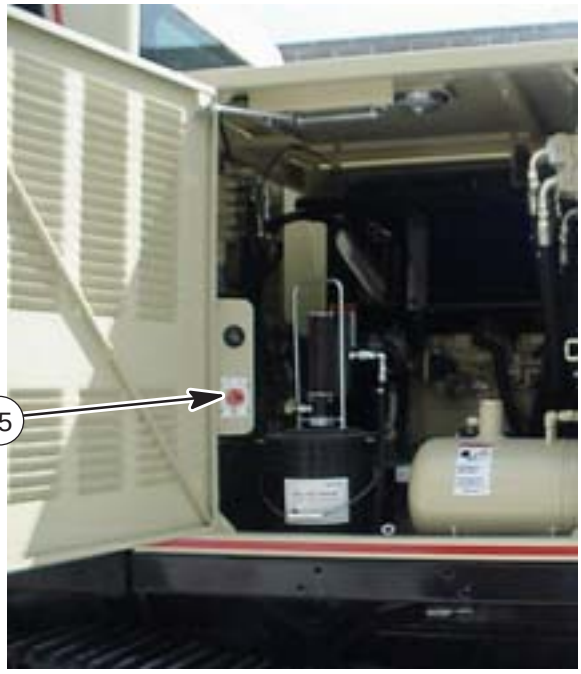


TOP OF ENCLOSURE

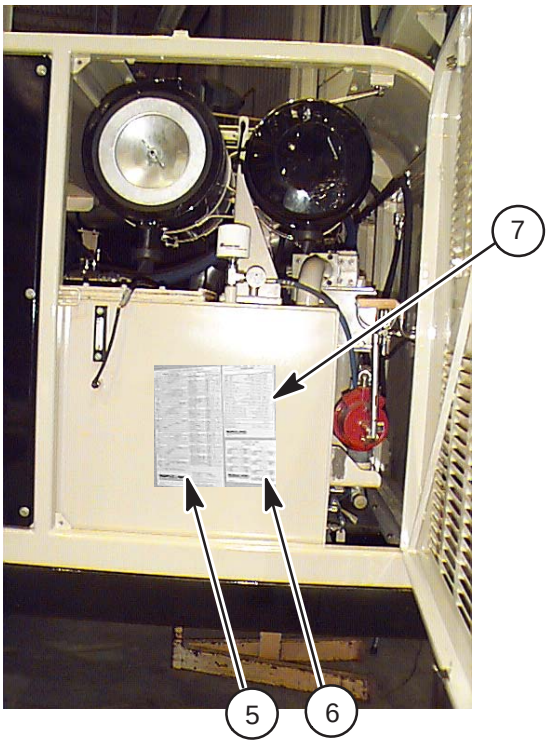


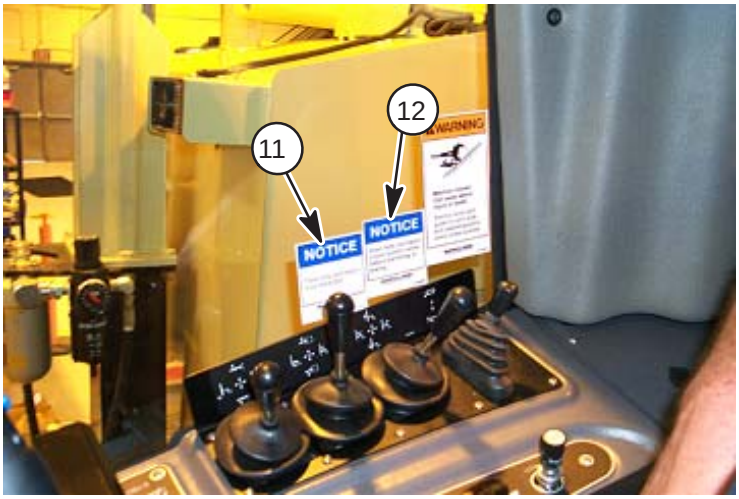
SIDE ENCLOSURE DOOR

SEPARATOR TANK

FRONT OF CAB

57677999 DECAL & NAMEPLATE ASSEMBLY





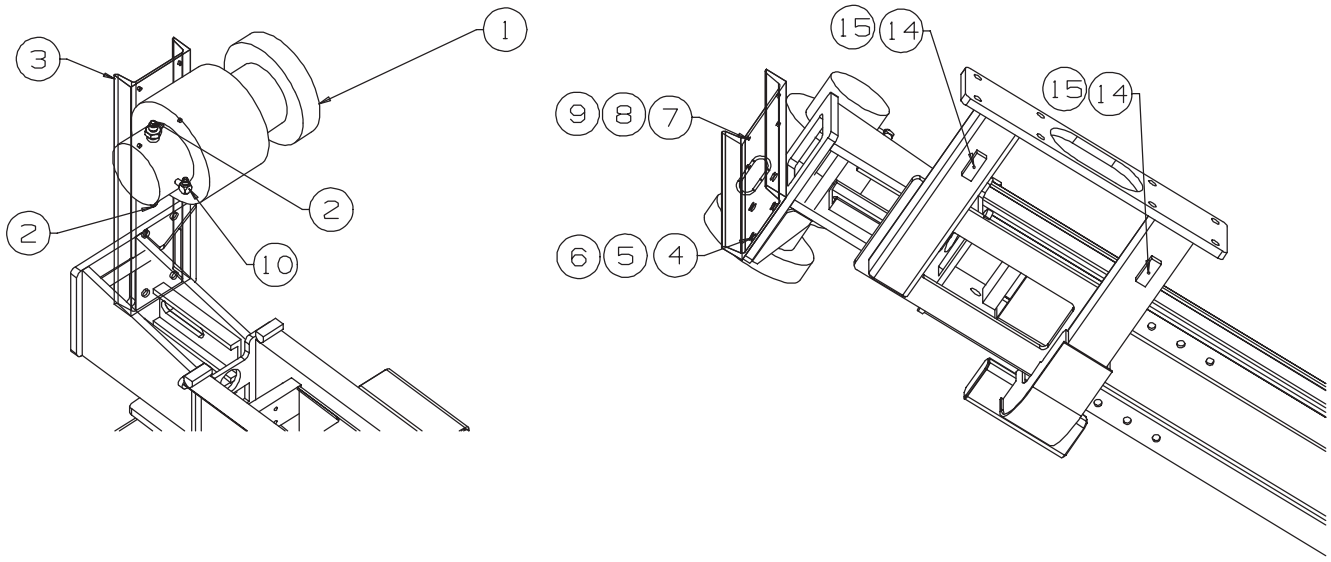
25 NOT SHOWN
26 NOT SHOWN
27 NOT SHOWN

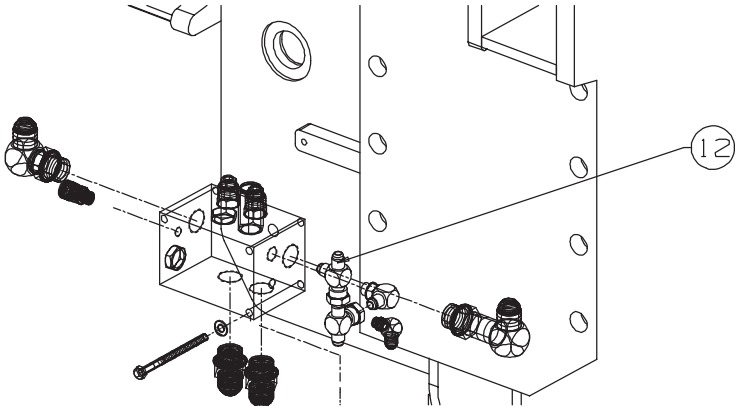
Ingersoll Rand

57677999 DECAL & NAMEPLATE ASSEMBLY

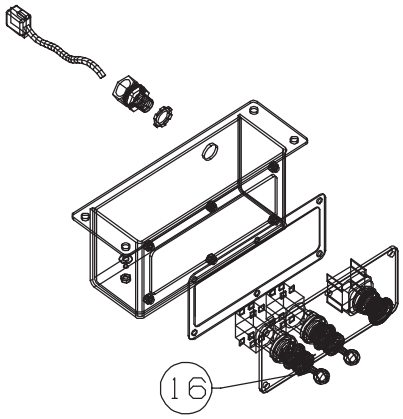
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51984888	1	STRIPE, RED (7/8" X 50') (NOT ILLUSTRATED)	
2	52327483	2	DECAL, CM780D RED LETTER SET	
3	52316270	2	DECAL, IR MONOGRAM (7" TALL SWOOSH)	
4	57722639	3	DECAL, IR MONOGRAM (15" TALL SWOOSH)	
5	52327517	1	DECAL, MAINTENANCE SUMMARY	
6	52330594	1	DECAL, LUBE ITEMS	
7	52327525	1	DECAL, SERVICE ITEMS	
8	52086469	1	NAMEPLATE, GENERAL	
9	51991941	1	NAMEPLATE, SERIAL NUMBER	
10	95064192	4	SCREW, DRIVE	
11	51777423	1	NAMEPLATE (NOTICE "TRAM ONLY")	
12	51780906	1	NAMEPLATE (NOTICE "OPEN BOTH OSCILLATION CYLINDERS")	
13	51985968	2	NAMEPLATE (NOTICE "DO NOT TOW THIS MACHINE FASTER THAN 2 MPH")	
14	51991867	3	NAMEPLATE (LIFT POINT)	
15	51991933	3	DECAL (EMERGENCY SHUTDOWN)	
16	59731257	1	DECAL (DIESEL FUEL)	
22	52330651	1	DECAL, CORNER STRIPE	
23	57701138	1	PLACE, NOISE LABEL, CE	
24	57701732	1	DECAL, HYDRAULIC OIL LEVEL	
25	52327475	1	DECAL, PUMP PRESSURE	
26	52292877	1	DECAL, P1 PUMP PRESSURE	
27	52292885	1	DECAL, P2 PUMP PRESSURE	

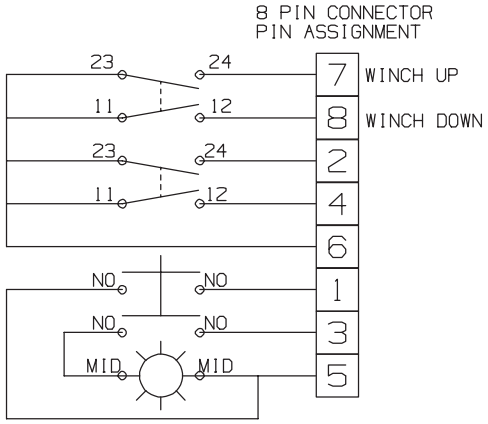
57737090 AUXILLIARY WINCH ASSY.





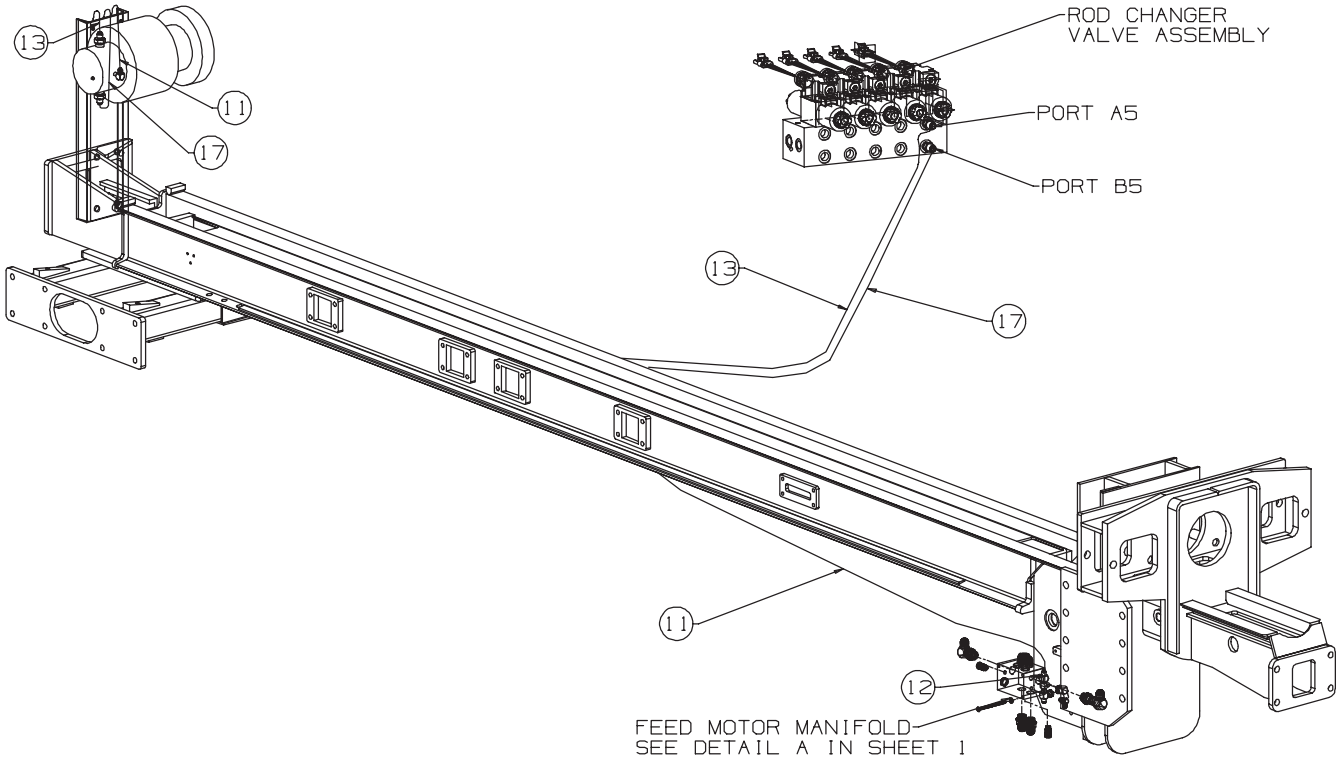
DETAIL A





57737090_00

57737090 AUXILLIARY WINCH ASSY.



Ingersoll-Rand

57737090 AUXILLIARY WINCH ASSY.

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	51862522	1	WINCH,HYD ROD,1/2 TON	
	51948495	1	HUB, FINAL PLANET	
	51948750	3	PIN,FINAL PLANET	
	51948768	6	CIRCLIP	
	51948776	3	GEAR,FINAL PLANET	
	51948784	3	BEARING,NEEDLE	
	51948982	1	SUNGEAR,FINAL	
	51948792	2	CIRCLIP	
	51948800	1	HUB,PRIMARY PLANET	
	51948818	3	PIN,PRIMARY PLANET	
	51948826	6	CIRCLIP	
	51948834	3	GEAR,PRIMARY PLANET	
	51948842	3	BEARING,NEEDLE	
	51948859	1	SUNGEAR,PRIMARY	
	51948867	1	BEARING,BALL	
	51948875	1	BEARING,BALL	
	51948883	3	PLATE,DIVIDER	
	51948891	2	PLATE,FRICTION	
	51948909	1	HUB,BRAKE	
	51948917	2	ALIGNER,SPRAG CLUTCH	
	51948925	1	CLUTCH,SPRING	
	51948941	6	SPRING,BRAKE	
	51948958	1	VALVE,SAFETY	
	51948966	1	ASSEMBLY,MOTOR	
2	51783512	2	ADAPTER	
3	51874154	1	MOUNT, HOIST	
4	96700216	4	SCREW, HEX HEAD	
5	96703657	4	NUT, HEX	
6	96700968	8	WASHER, FLAT	
7	95920484	4	CAPSCREW	
8	95285235	4	LOCKNUT, HEX	
9	95064671	8	SUB 95922365 WASHER, PLT	
10	95209094	1	FITTING, HYD	
11	51300549	1	HOSE ASSY	
12	95003182	1	TEE	
13	51780963	1	HOSE ASSY	
14	96727565	2	BOLT	
15	95301875	3	CLAMP, HOSE	
16	51869931	1	SWITCH, JOYSTICK	
17	51780963	1	HOSE ASSY	

51873925 TOOL KIT, 4 INCH ROD

LIST ONLY, NO DRAWING REQUIRED

51873925 TOOL KIT, 4 INCH ROD

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
5	51862514	1	CHUCK,BIT DETACHING	
6	51791770	1	CHUCK,BIT(BLANK)	
7	51792570	1	MANUAL,TEMPLATES,CHUCK B	
19	52129111	1	PLATE, LOCKING	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52138963 TOOL KIT, 3.5 INCH ROD

LIST ONLY, NO DRAWING REQUIRED

52138963 TOOL KIT, 3.5 INCH ROD

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
6	51862514	1	CHUCK,BIT DETACHING	
7	51791770	1	CHUCK,BIT(BLANK)	
8	51792570	1	MANUAL,TEMPLATES,CHUCK B	
19	52129111	1	PLATE, LOCK	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57708505 KIT, 3.5 INCH DRILL ROD

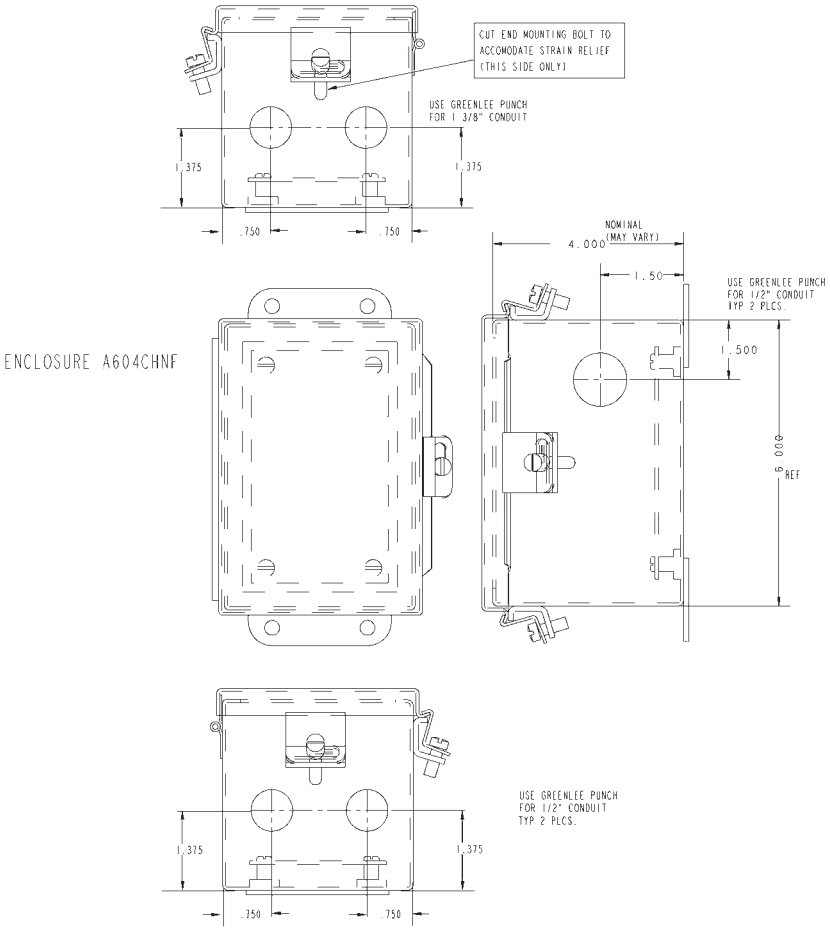
LIST ONLY, NO DRAWING REQUIRED

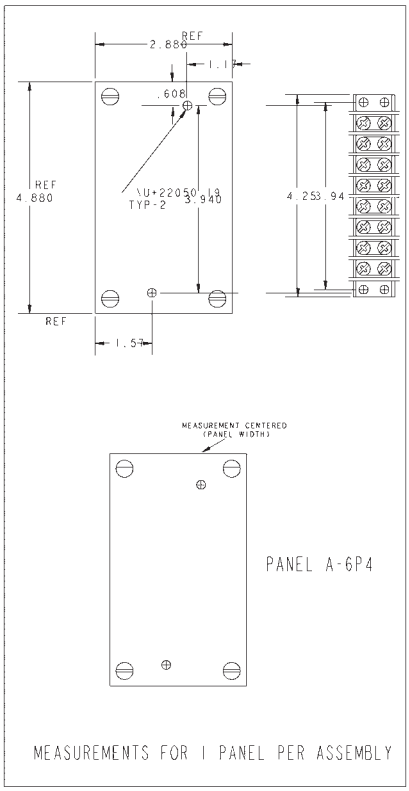
57708505 3.5 INCH DRILL ROD

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57699027	1	BUSHING ASSEMBLY	
2	57699019	1	FORK, BREAKOUT WRENCH	
3	52138203	2	WELDMENT, STAR, 3.5” X 7, T	
4	52138211	1	WELDMENT, STAR, 3.5” X 7, M	
5	96700216	18	SCREW, HEX HEAD	
6	96700968	36	WASHER, FLAT	
7	96703657	18	NUT,HEX	
8	51994978	1	GASKET	
10	52138112	8	ARM, GRIPPER	
11	51999092	1	WHEEL,GENEVA DRIVEN,3 IN	
12	51999100	1	WHEEL,GENEVA DRIVER,7–3	
13	52330008	4	RING, CAROUSEL, 3.5”	
14	52330032	4	RING, GATE, 3.5” PIPE	
15	96726914	38	BOLT	

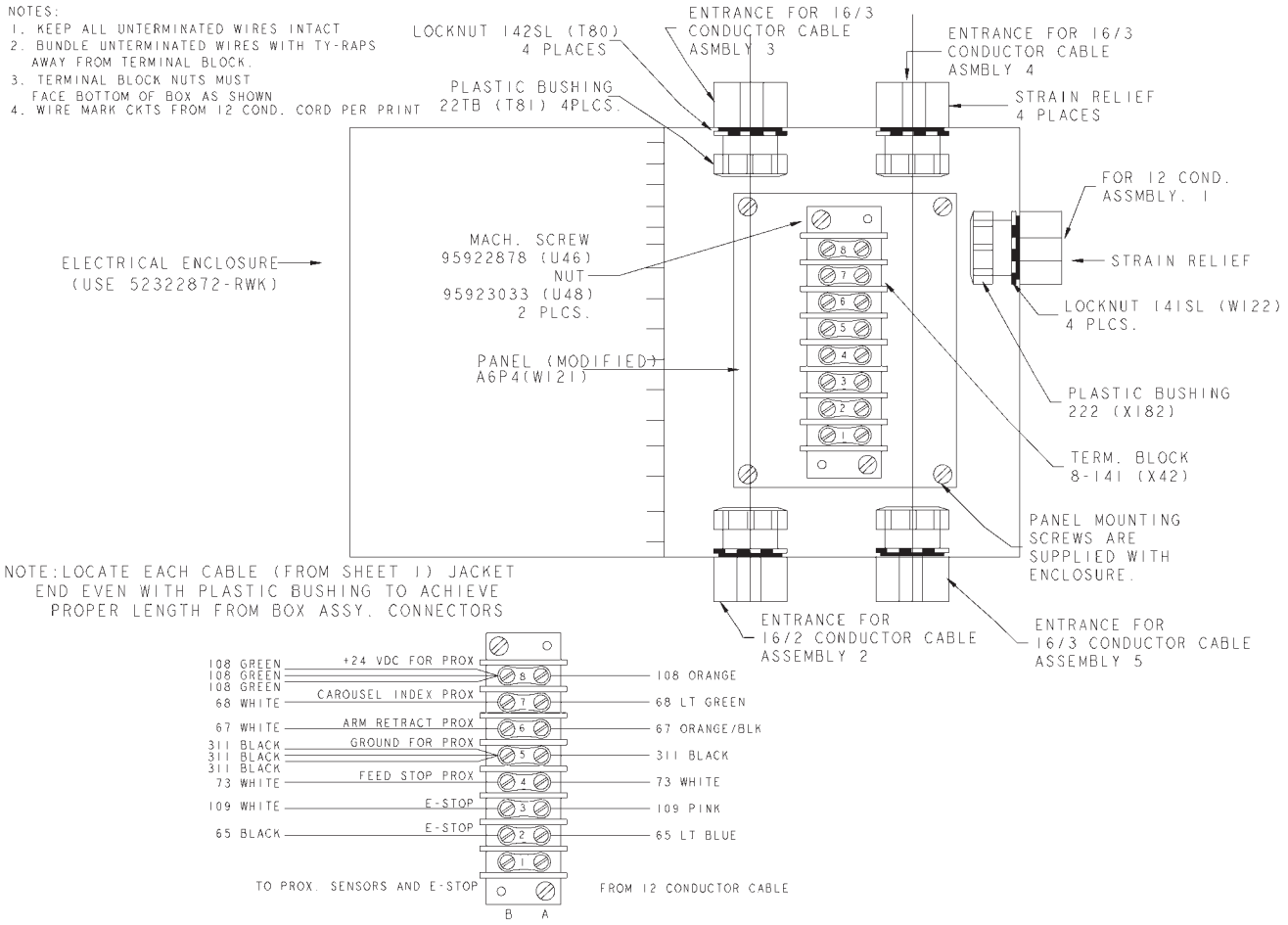
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57673444 GUIDE WIRING ASM



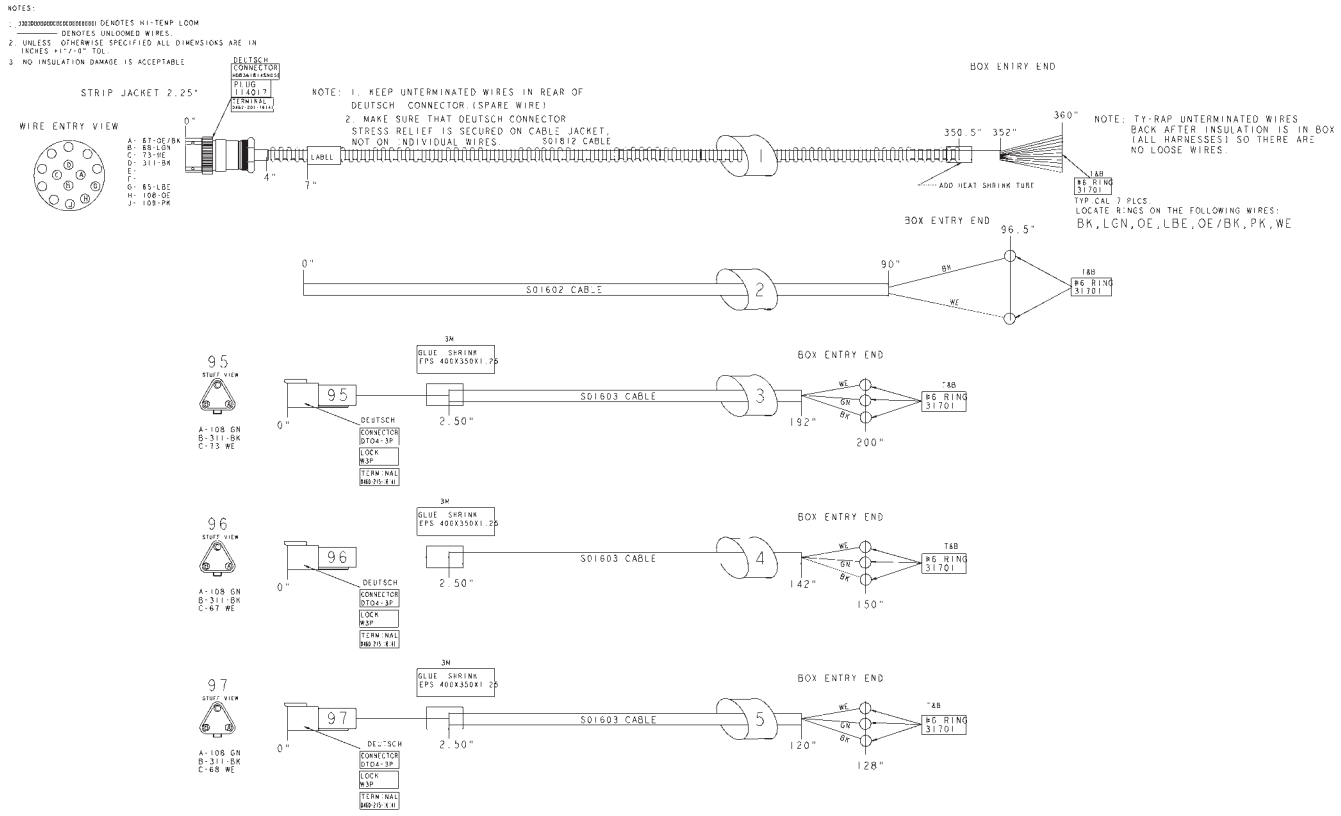


57673444 GUIDE WIRING ASM



WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

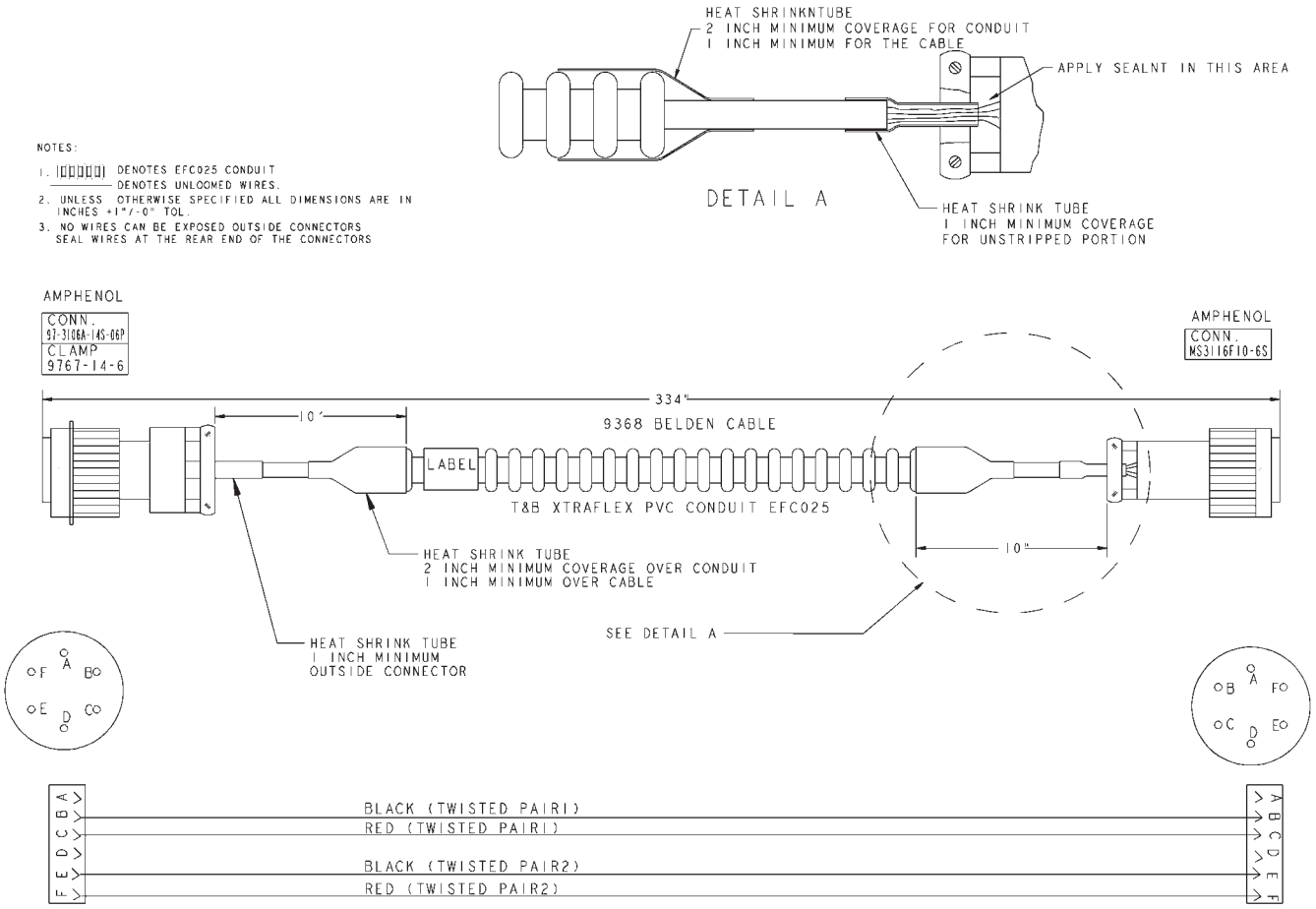
57673444 GUIDE WIRING ASM



57673444 GUIDE WIRING ASM

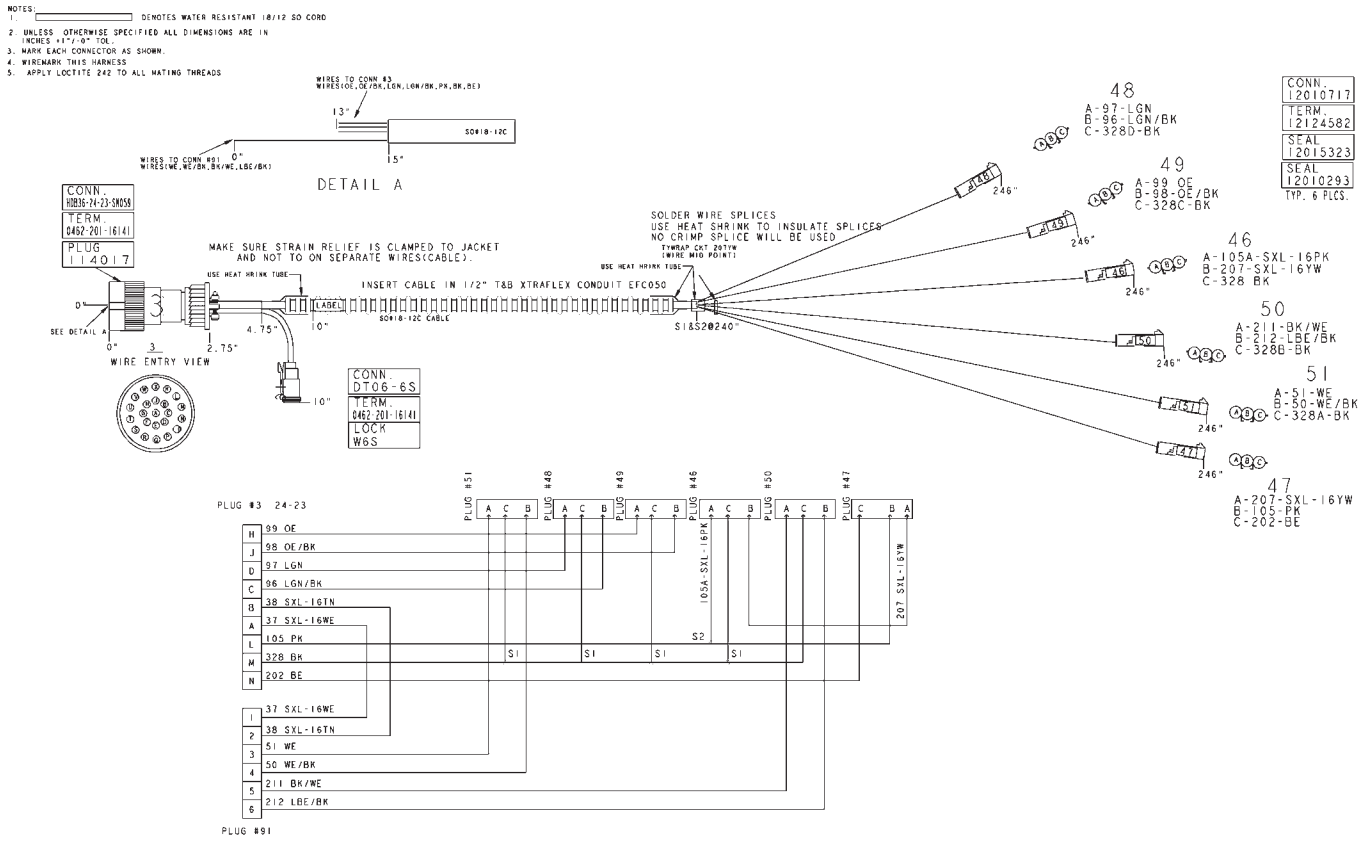
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57709511	1	HARNESS,GUIDE WIRING	
2	58150103	1	CORD,14/2 (97 INCHES)	
3	58150111	1	WIRE, ELECTRICAL–14/3 (200 INCHES)	
4	58150111	1	WIRE, ELECTRICAL–14/3 (150 INCHES)	
5	58150111	1	WIRE, ELECTRICAL–14/3 (128 INCHES)	
6	57709529	1	NEMA,4 BOX,MODIFIED	
7	50906726	1	STRIP, TERMNL	
8	95410627	2	SCREW	
9	95076717	2	NUT	
10	95326740	2	WASHER	
11	51918381	1	PANEL,ELEC BOX,MODIFIED	
12	95245072	4	CONNECTOR	
13	51948735	5	LOCKNUT	
14	51874691	1	CONNECTOR	
15	51874972	7	TONGUE,RING	
16	57678088	3	CONNECTOR,3 PIN	
17	57678096	3	WEDGE,3 PIN	
18	57625964	9	PIN, MALE	
19	95507588	7	TERMINAL	

57673451 HARNESS, LIM SENSOR

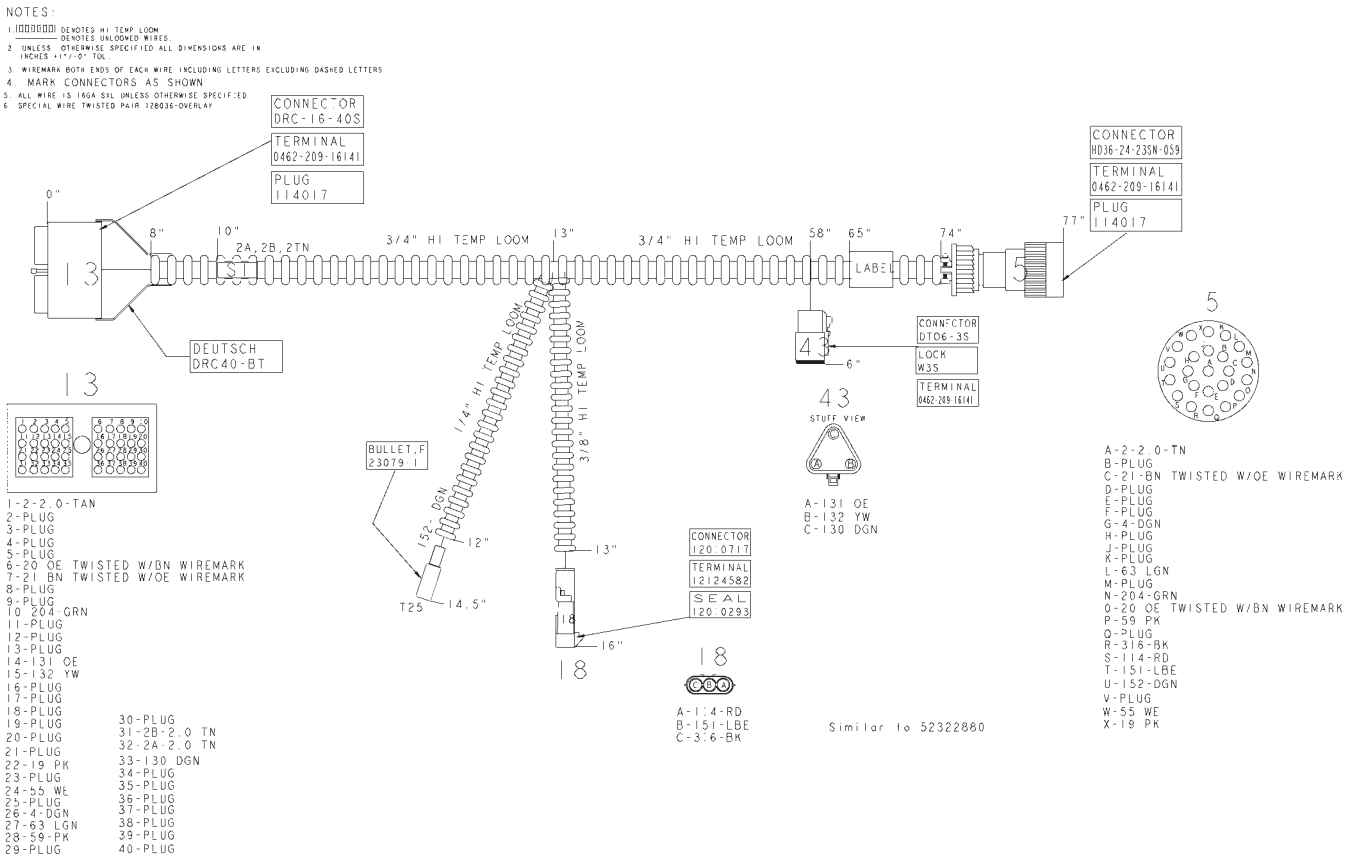


WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

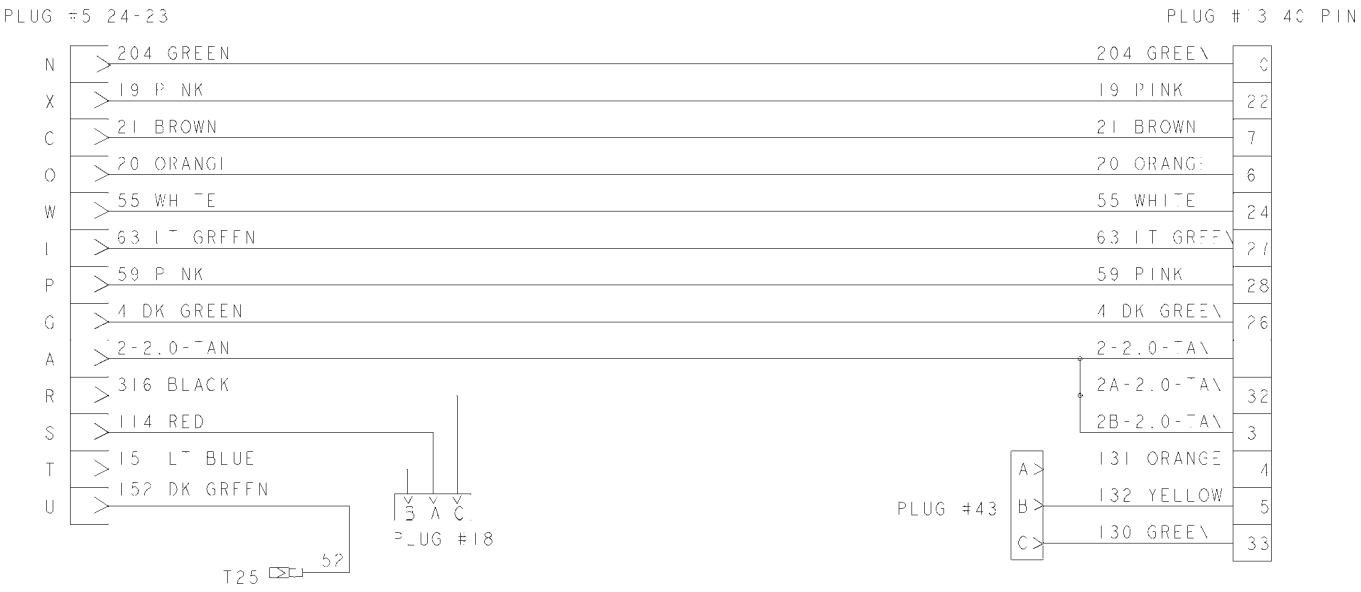
57673469 HARNESS, ROD CHANGER WIRING



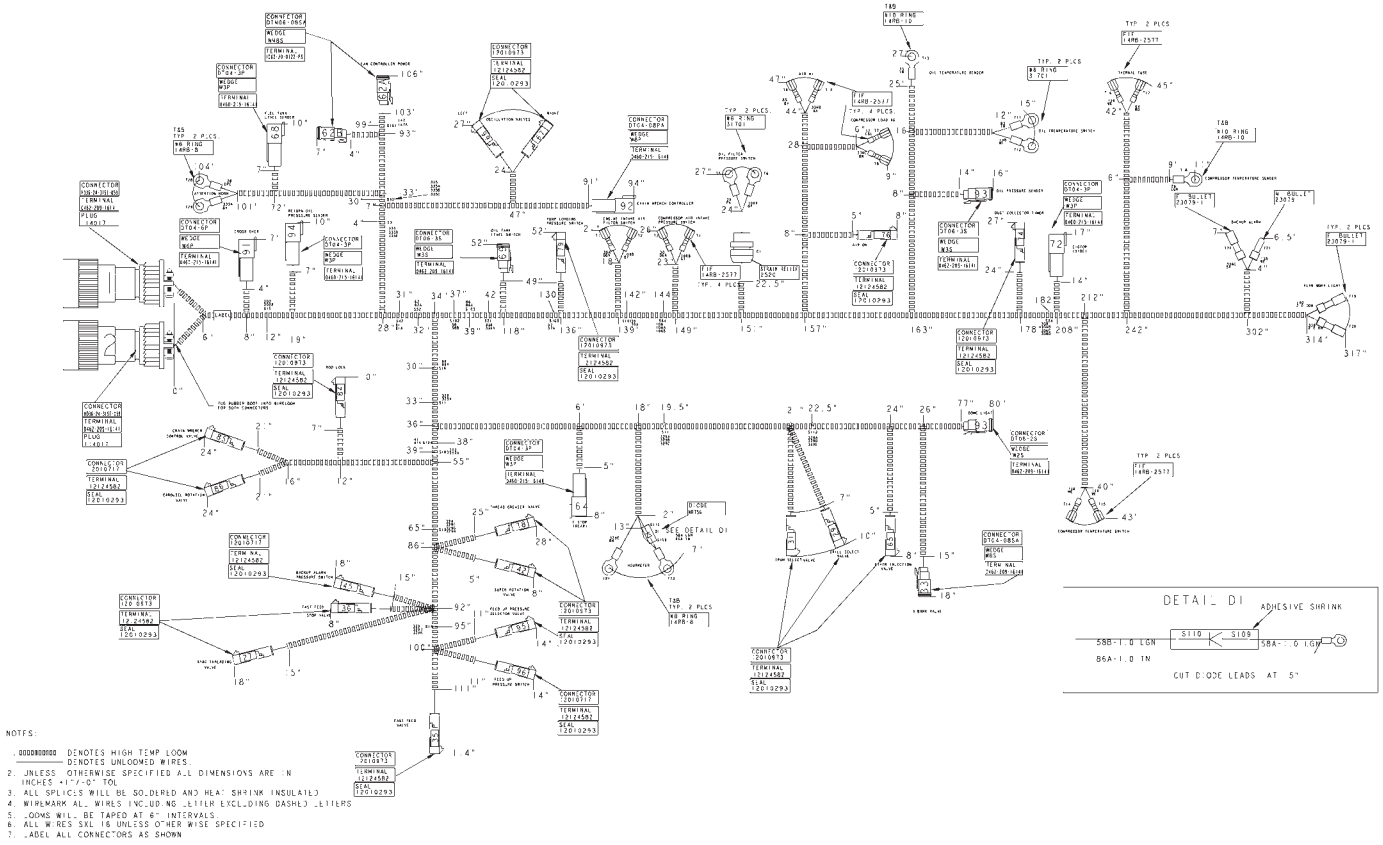
57673477 HARNESS, ENGINE ECM



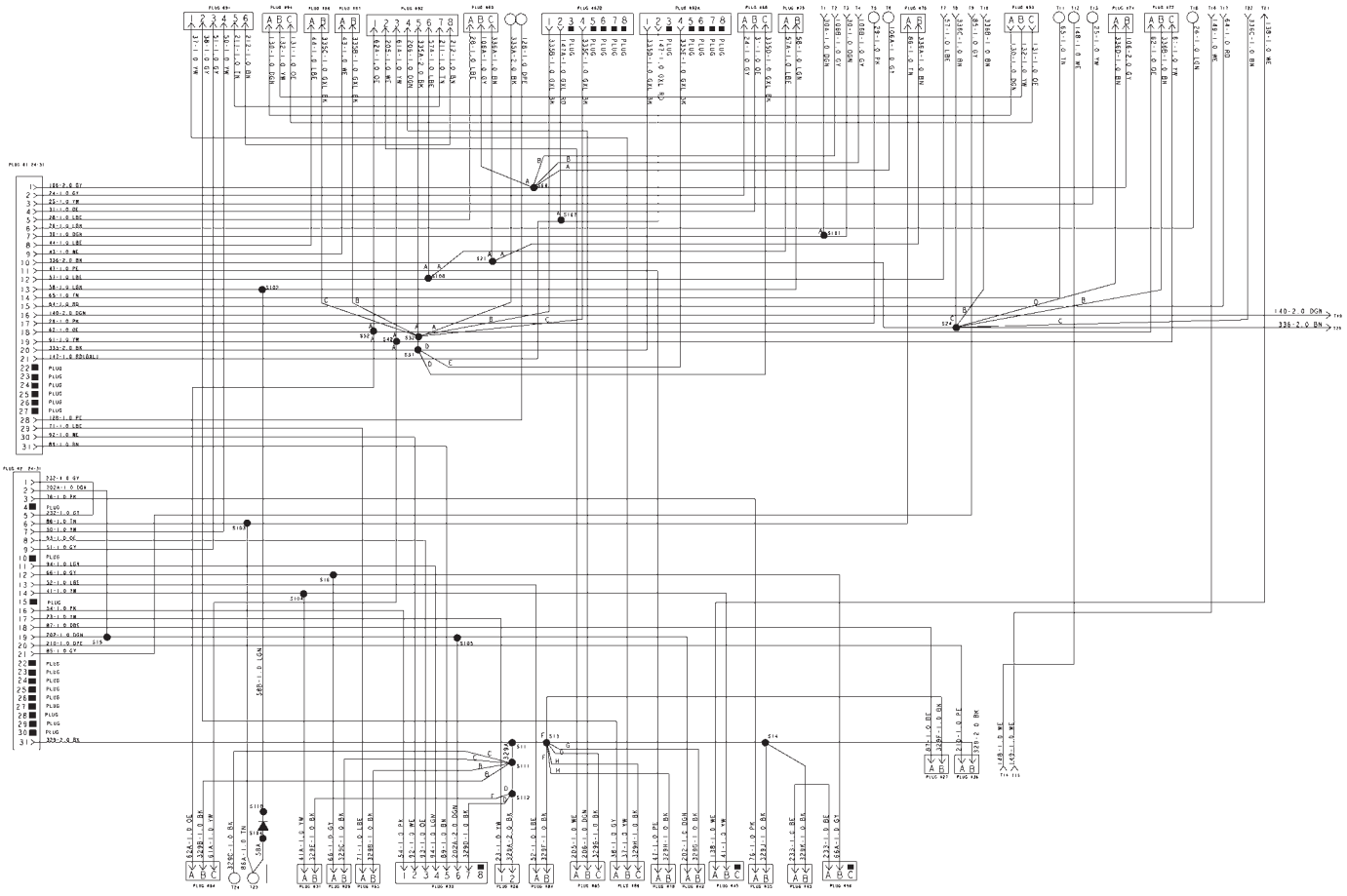
57673477 HARNESS, ENGINE ECM



57673485 HARNESS, DRILL/TRAM FUNCTION

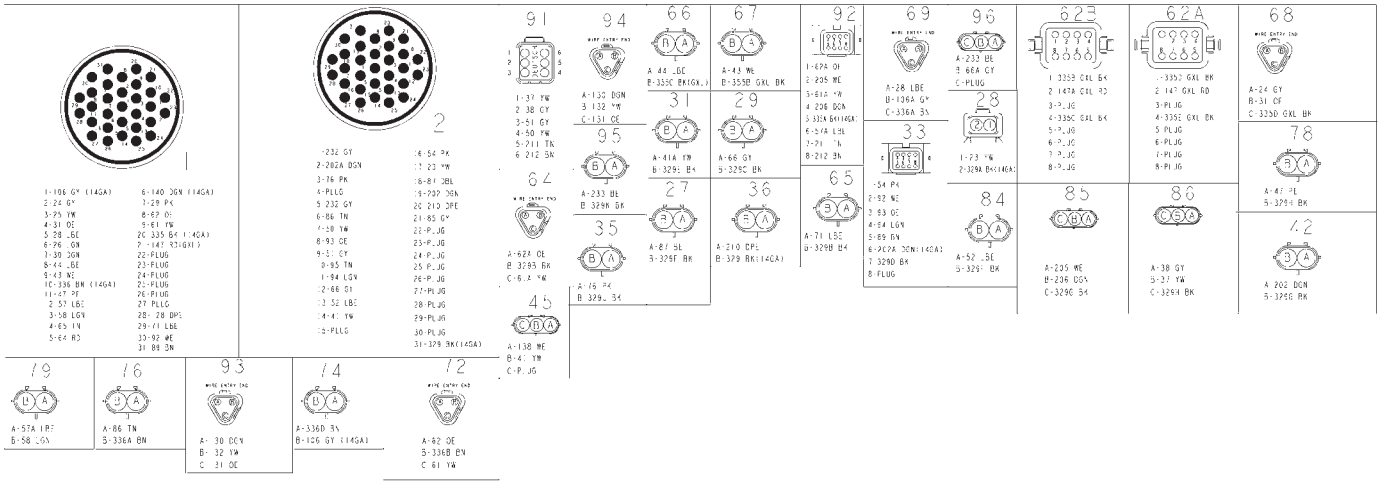


57673485 HARNESS, DRILL/TRAM FUNCTION

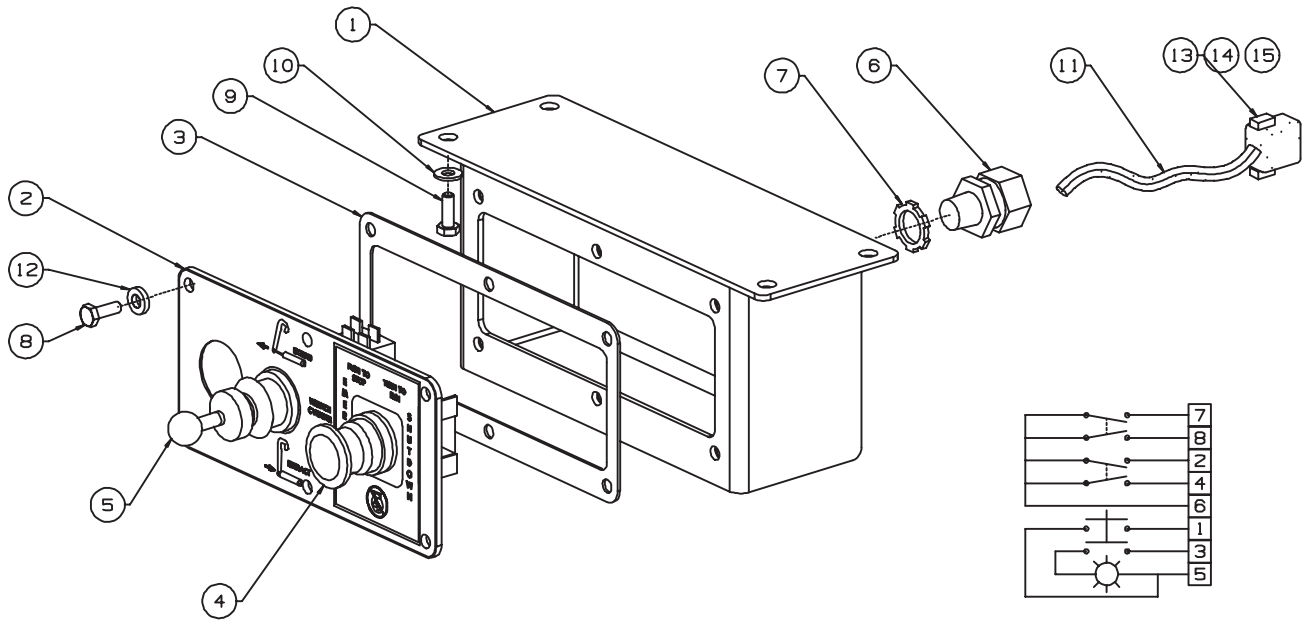


WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57673485 HARNESS, DRILL/TRAM FUNCTION



57673493 CONTROL BOX, CHAIN WRENCH ASM



NOTE: FINISH PAINT REQUIRED

1. MACHINED SURFACES TO BE GREASED PRIOR TO PAINTING

2. CLEAN AND PRIMER PAINT PER INGERSOLL-RAND ROTARY DRILL SPECIFICATION RDS -1- 001,

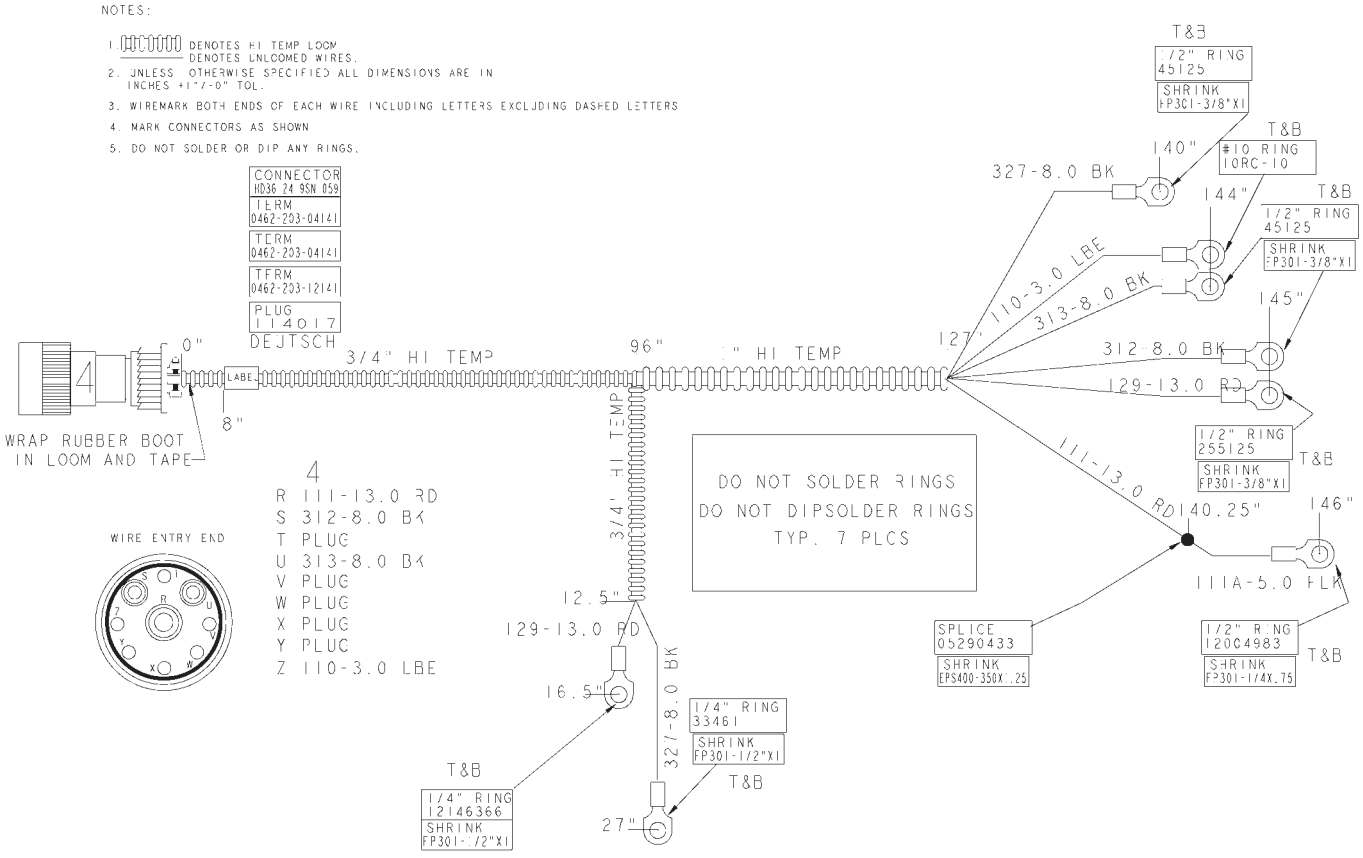
3. TOP COAT PAINT TO BE HIGH SOLIDS POLYURETHANE, 3-5 MIL THICK, SHERWIN WILLIAMS PART NO. F63JXH0466-7040 OR EQUIVALENT. COLOR: INGERSOLL RAND BEIGE.

57673493 CONTROL BOX, CHAIN WRENCH ASM

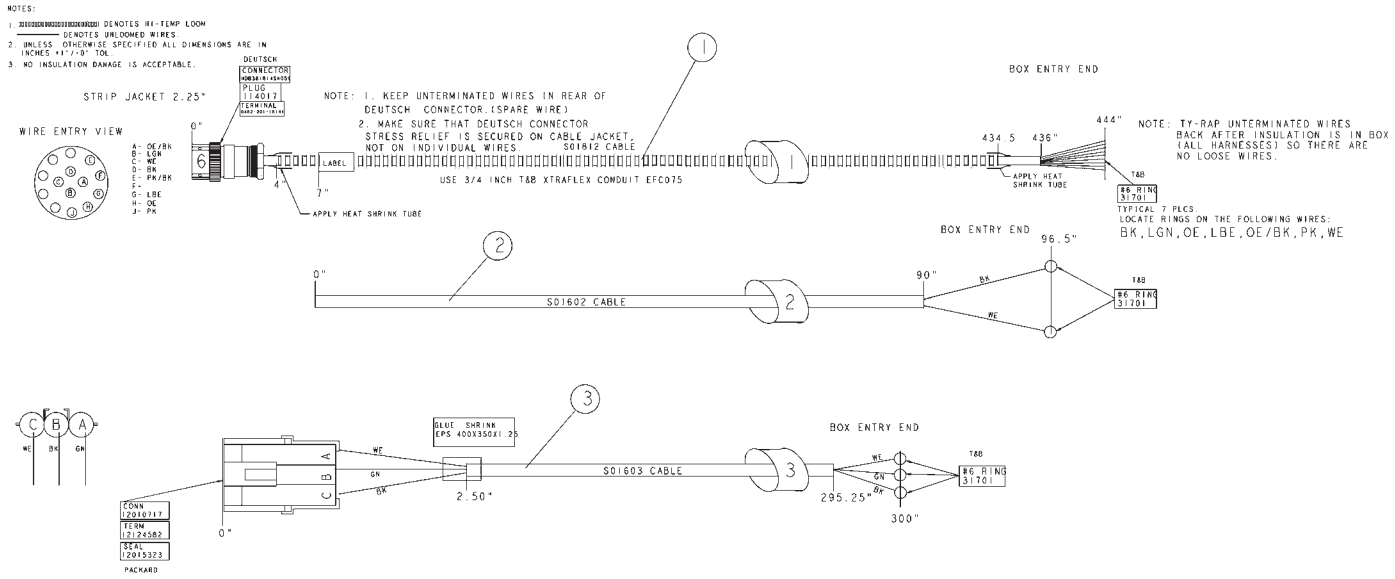
1	51992493	1	BOX, ELECTRICAL
2	51992477	1	NAMEPLATE, WRENCH/HOIST
3	51915957	1	GASKET, PANEL
4	52325453	1	SWITCH, EMERGENCY STOP
5	51869931	1	SWITCH, JOYSTICK
6	56991193	1	CONNECTOR
7	51948735	1	LOCKNUT
8	96727987	6	CAPSCREW
9	96714613	4	SCREW
10	96700828	4	WASHER
11	57161788	1	CABLE
12	96701289	6	WASHER
13	54651286	1	RECEPTACLE, 8 CIRCUIT
14	59434001	8	SOCKET SIZE
15	59437251	1	WEDGE, 8 CIRCUIT, SOCKETS

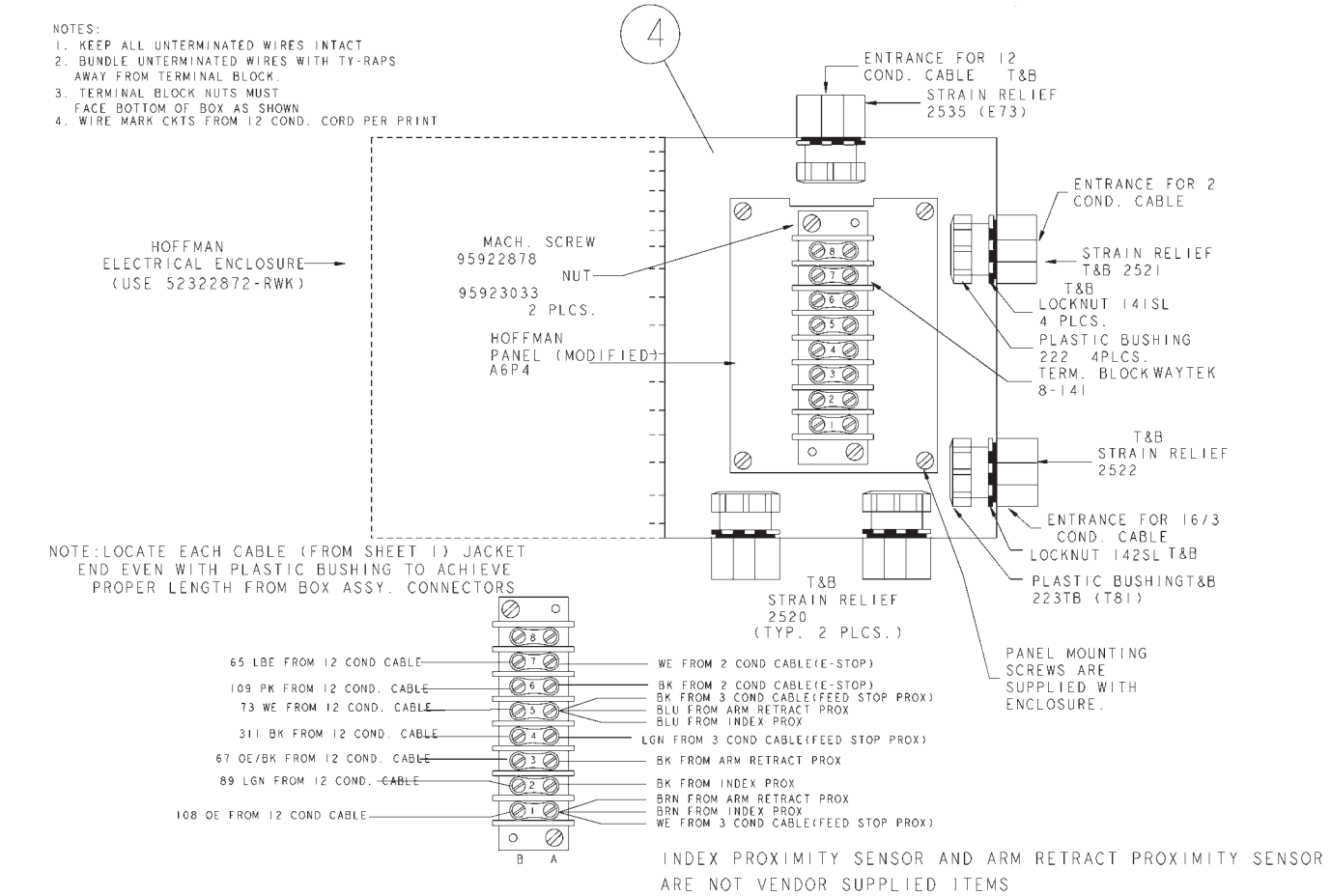
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52322955 HARNESS, WIRING MAIN ASM



52322872 HARNESS, WIRING DRL GUIDE





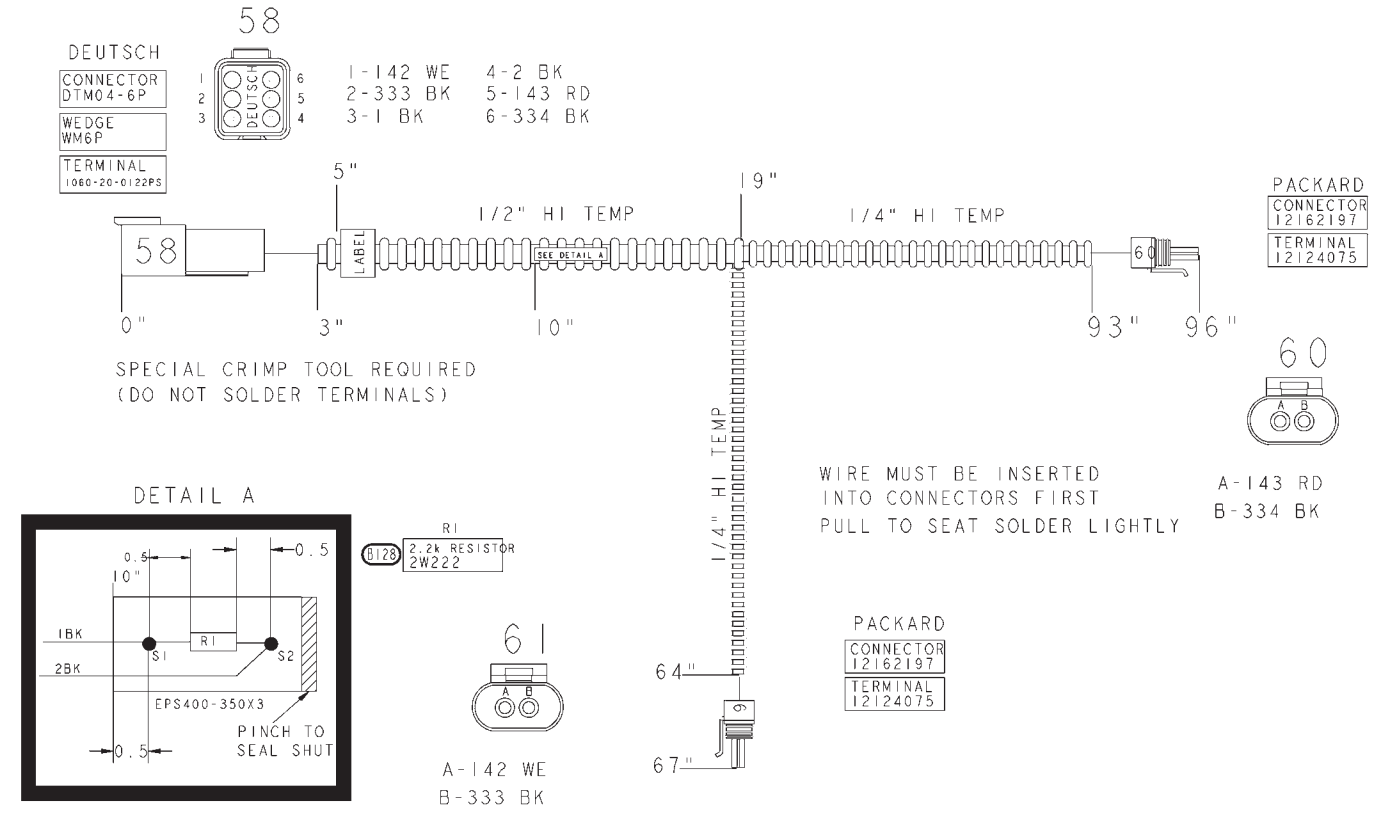
52322872 HARNESS, WIRING DRL GUIDE

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57709339	1	HARNESS,BULKHEAD	
2	58150103	97	INCHES CORD,14/2	
3	57709347	1	HARNESS,FEED STOP WIRING	
4	51918399	1	ASSY,BOX,ELECTRICAL	

52323003 HARNESS, WIRING COC/HOC

NOTES:

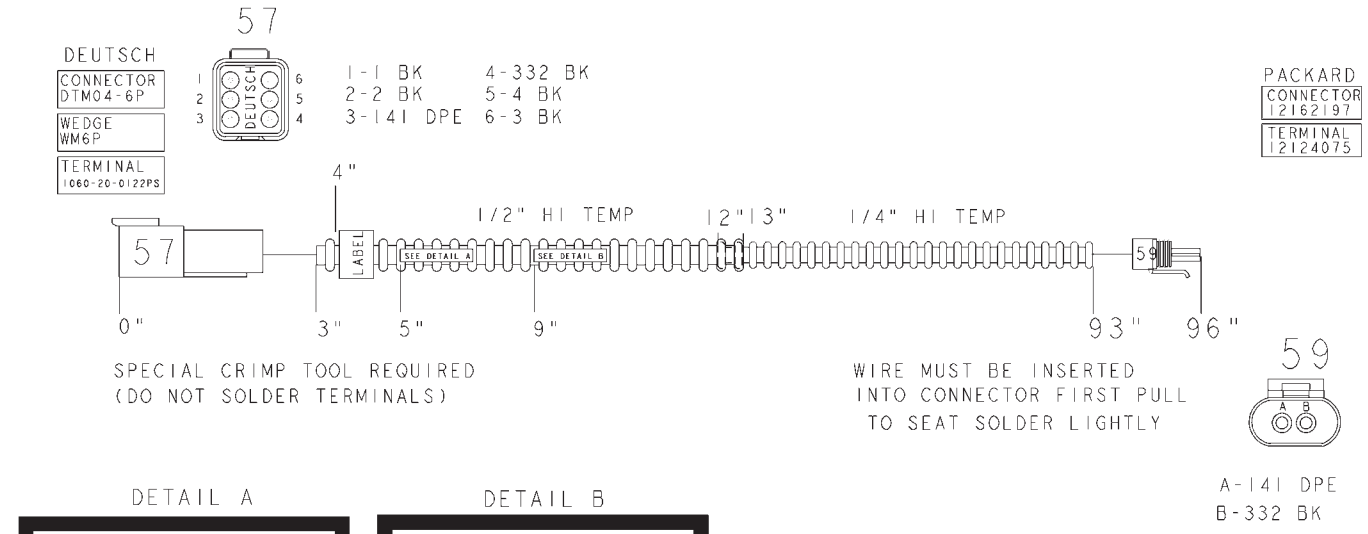
1. |||||||||| DENOTES HI TEMP LOOM
   ———— DENOTES UNLOOMED WIRES.
2. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES +1"/-0" TOL.
3. WIREMARK BOTH ENDS OF EACH WIRE INCLUDING LETTERS EXCLUDING DASHED LETTERS
4. MARK CONNECTORS AS SHOWN
5. SPECIAL TOOLING REQUIRED
6. ALL WIRE IS 16GA GXL UNLESS OTHERWISE SPECIFIED

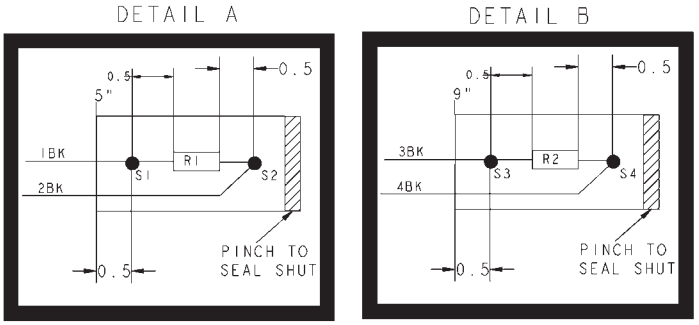


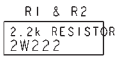
52323011 HARNESS, WIRING CAC/RAD

NOTES:

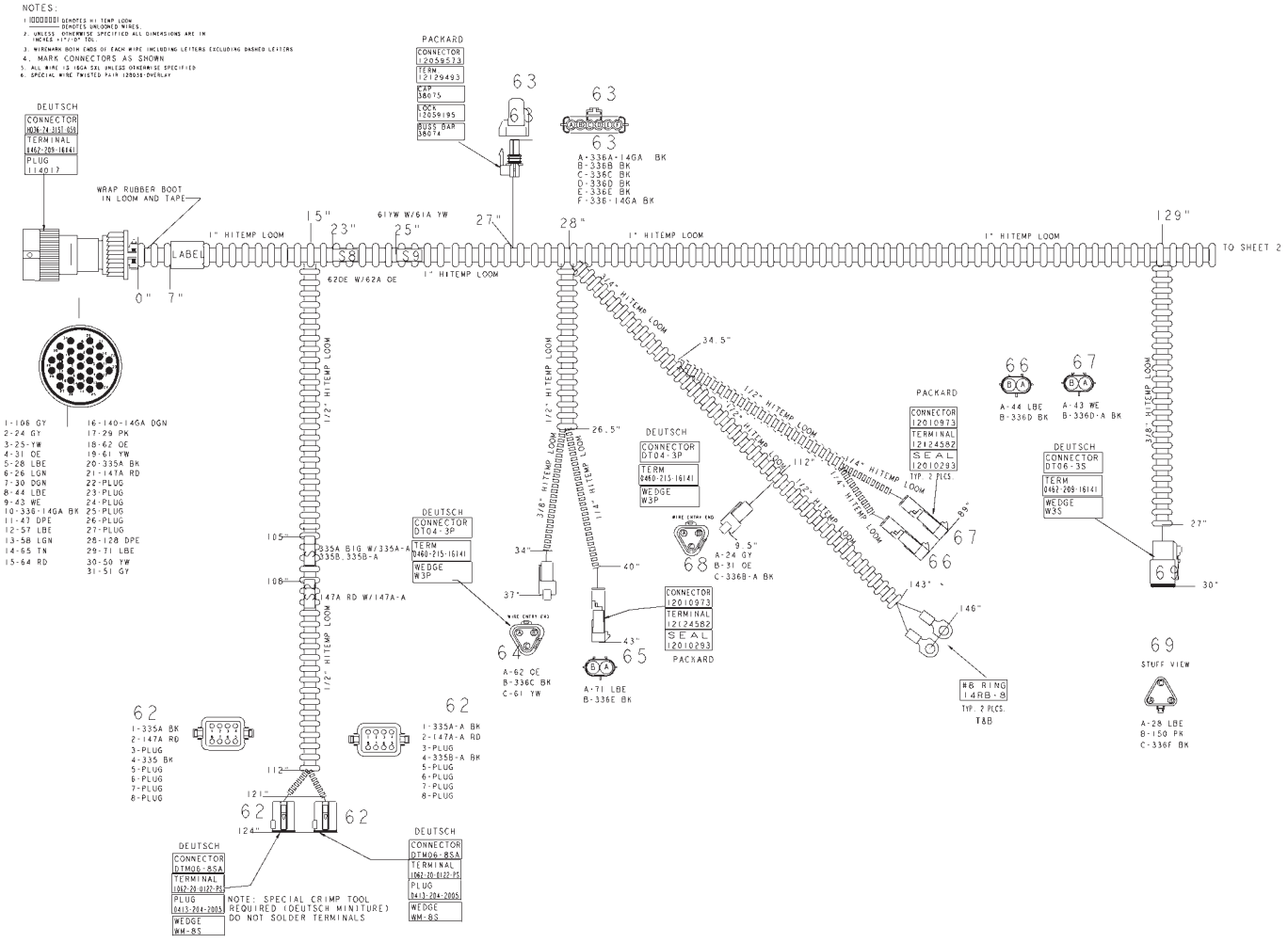
1. ▯▯▯▯▯▯▯▯ DENOTES HI TEMP LOOM
   ———— DENOTES UNLOOMED WIRES.
2. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES +1"/-0" TOL.
3. WIREMARK BOTH ENDS OF EACH WIRE INCLUDING LETTERS EXCLUDING DASHED LETTERS
4. MARK CONNECTORS AS SHOWN
5. SPECIAL TOOLING REQUIRED
6. ALL WIRE IS 16GA GXL UNLESS OTHERWISE SPECIFIED







52322948 HARNESS, WIRING ENCL



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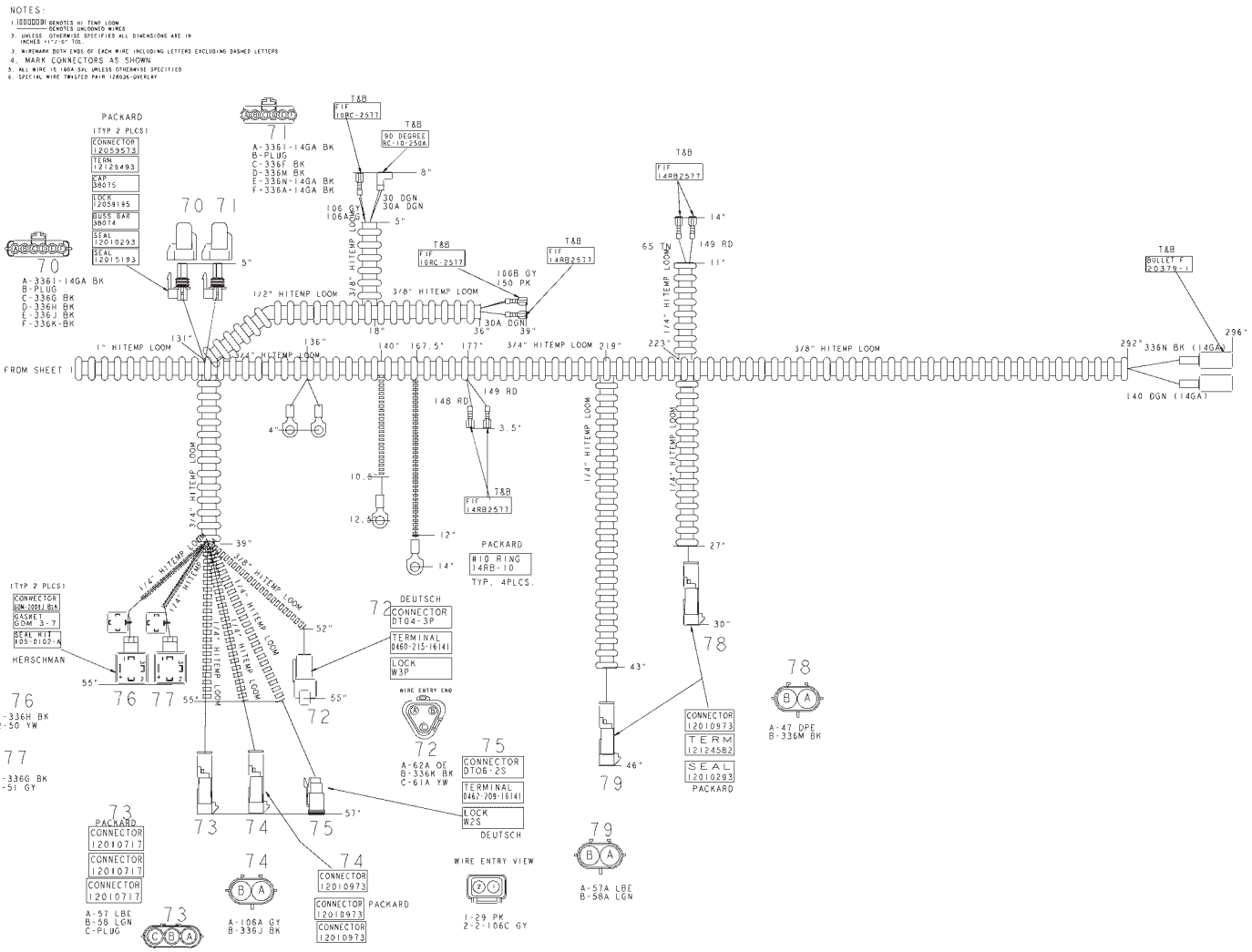
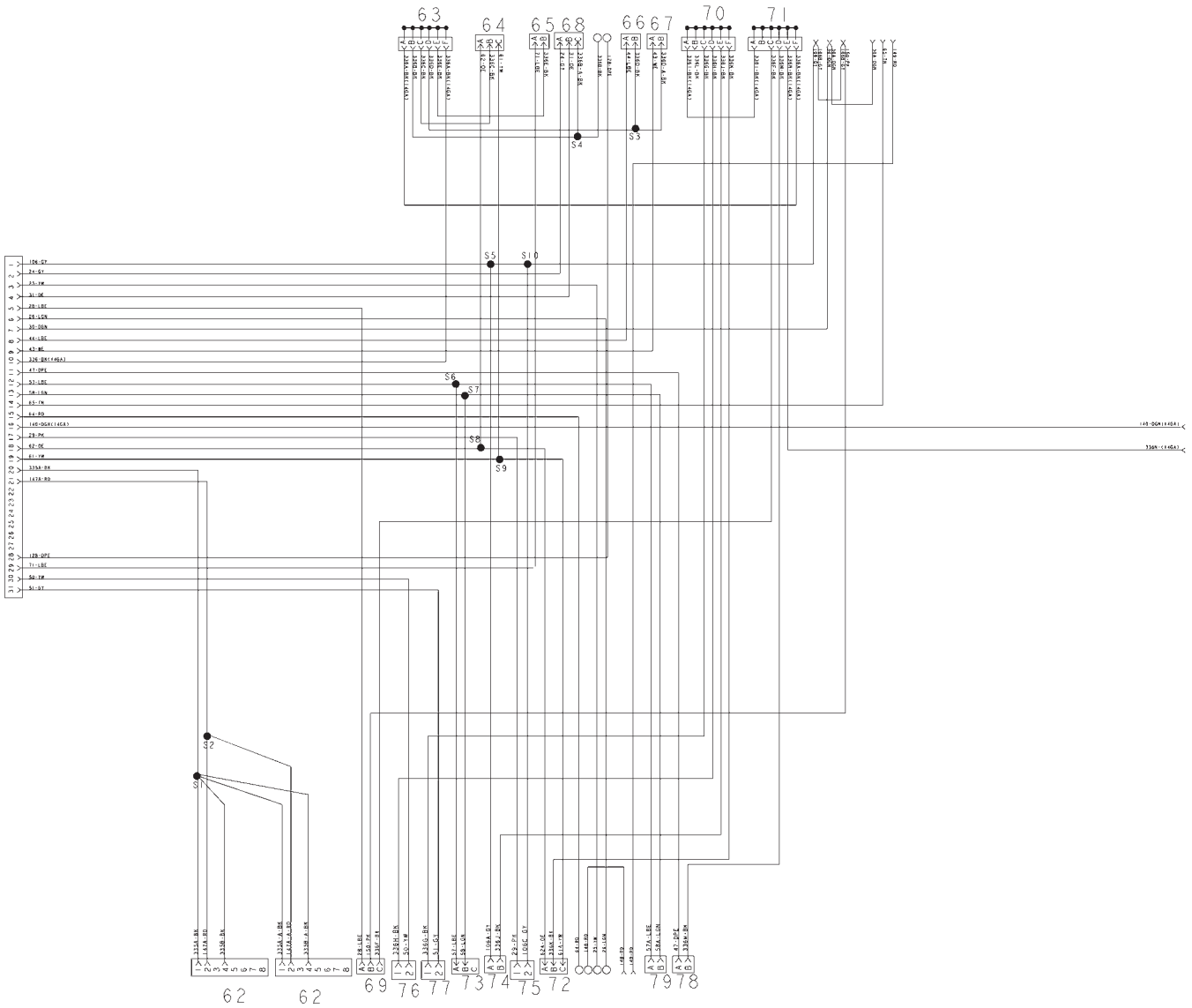
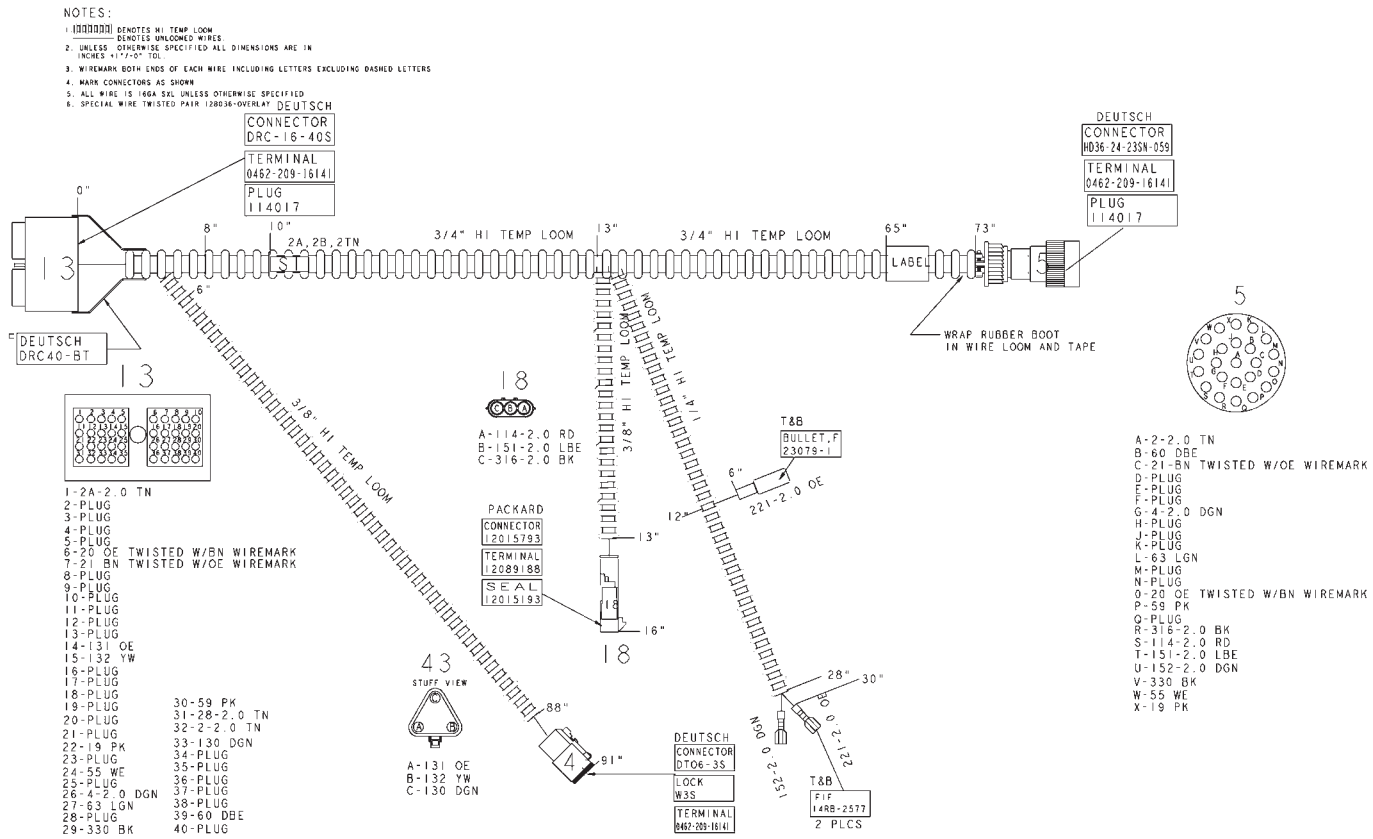


WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

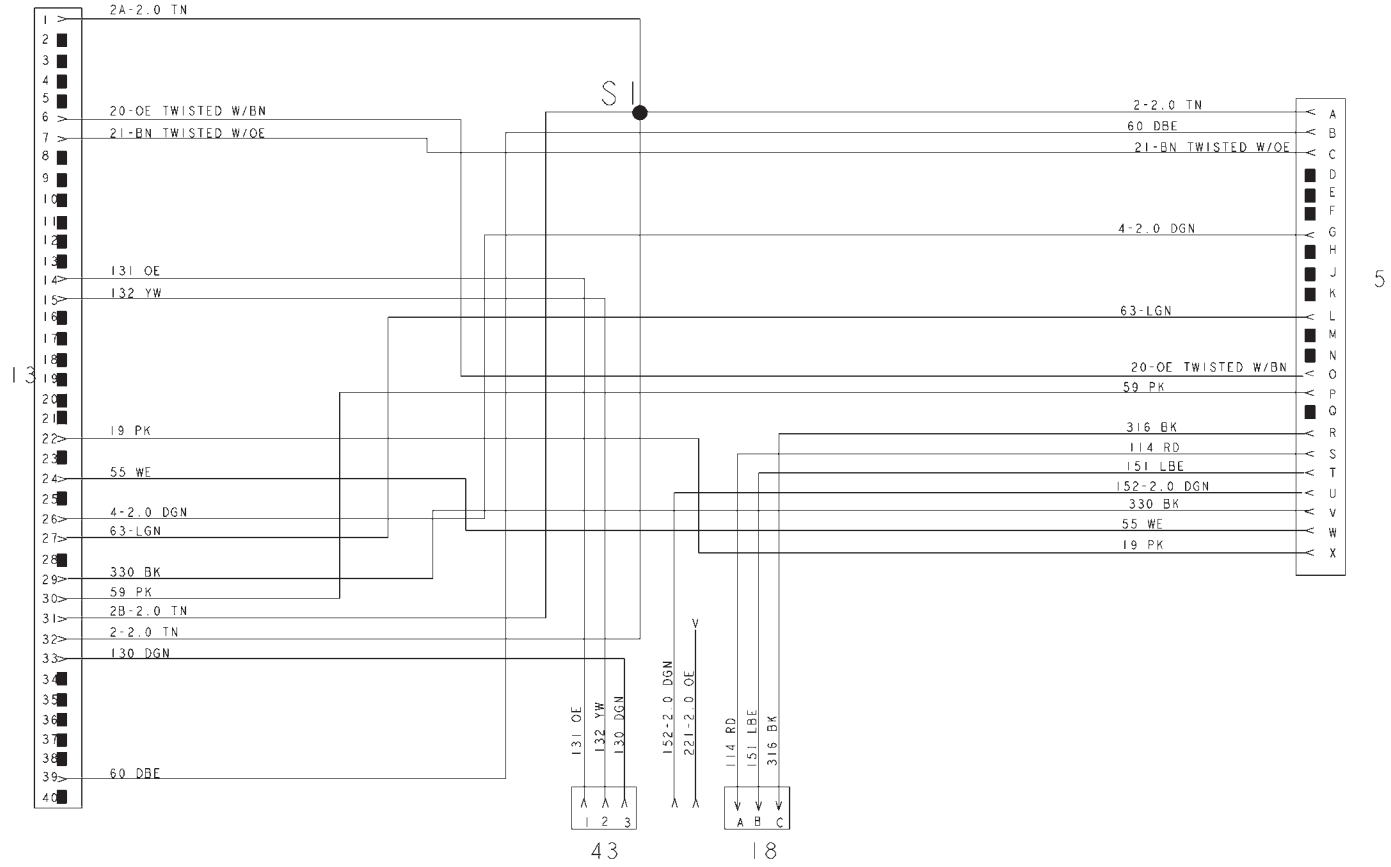
52322948 HARNESS, WIRING ENCL



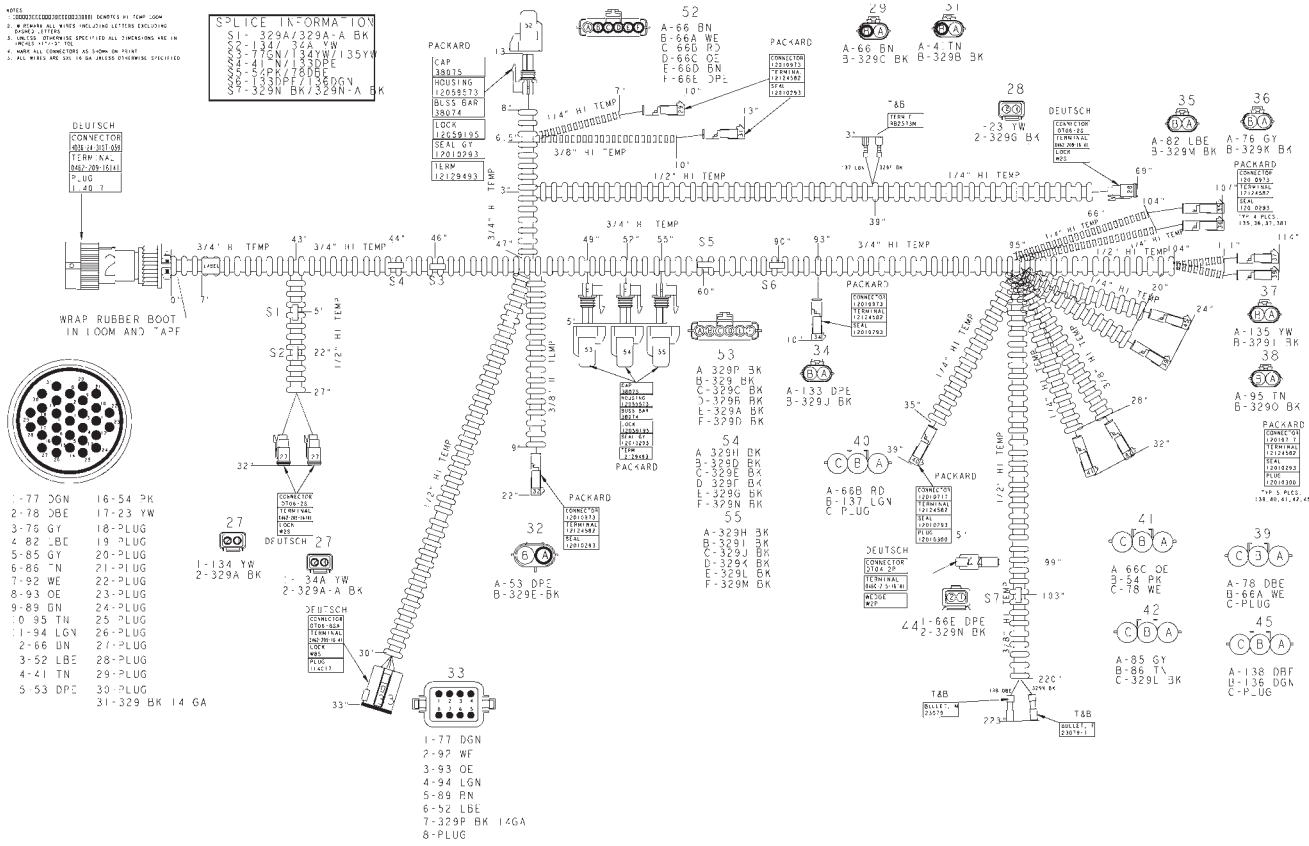
52322880 HARNESS, WIRING ENG. ECM



52322880 HARNESS, WIRING ENG. ECM



52322930 HARNESS, WIRING ENCL



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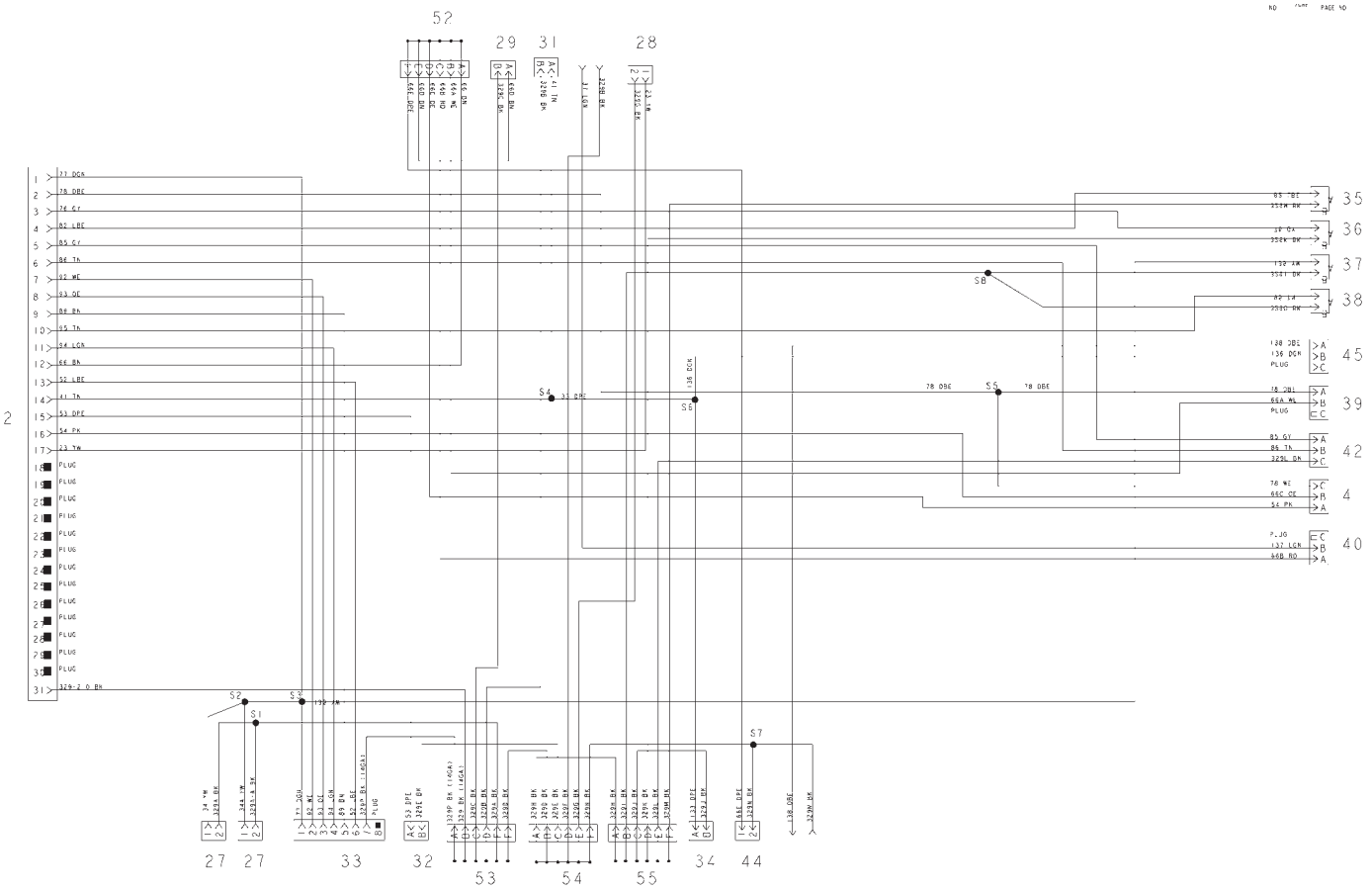
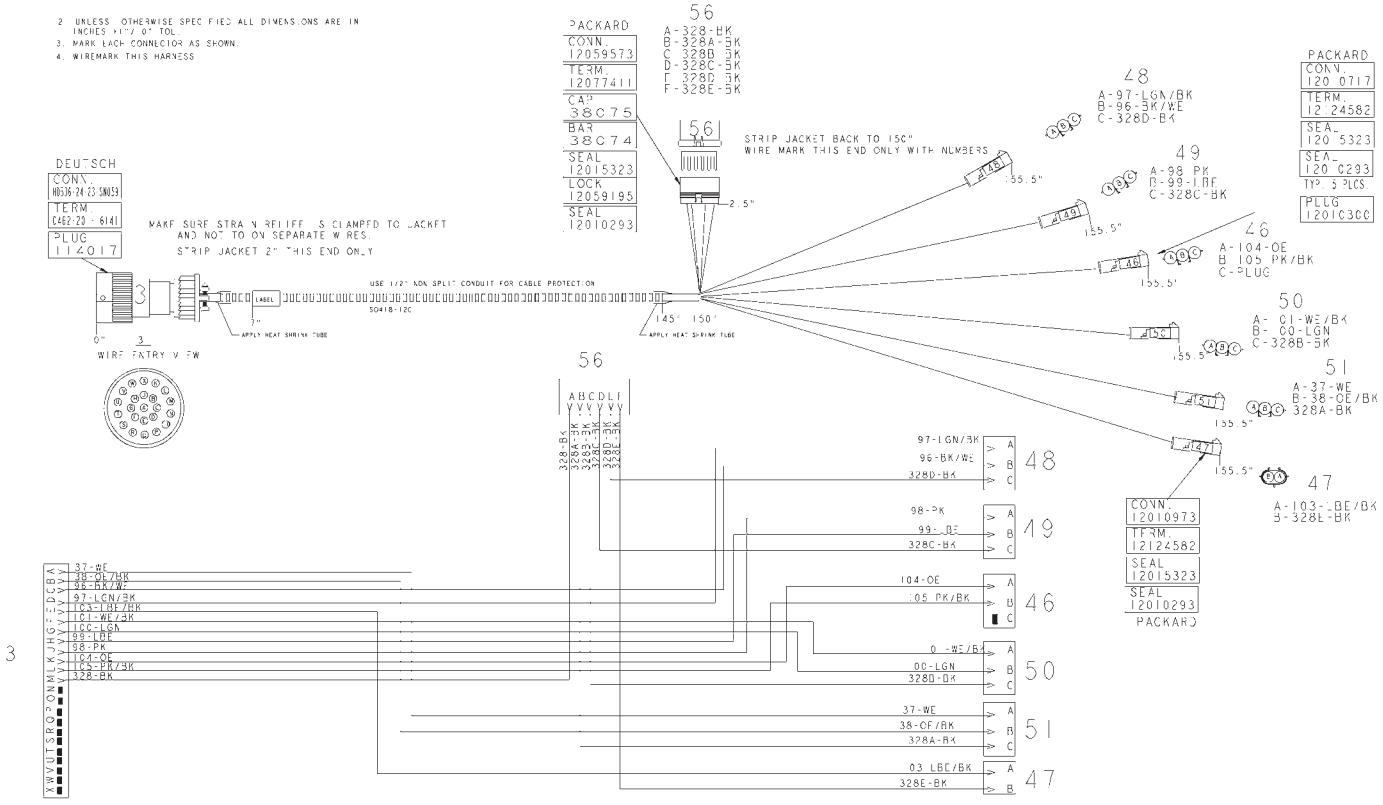
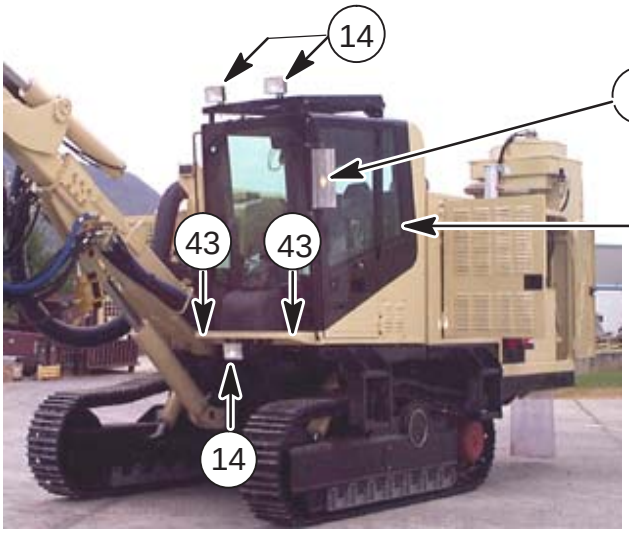


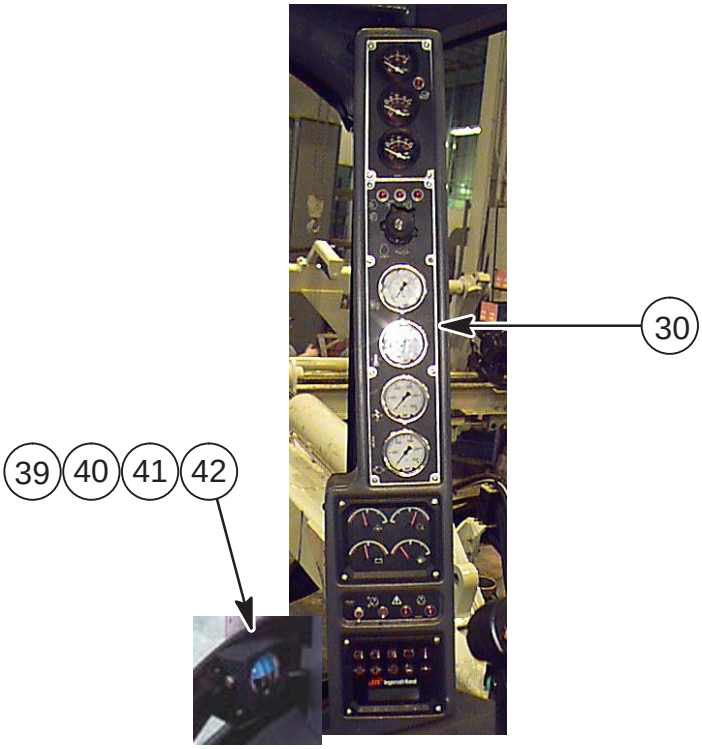
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52322849 HARNESS, WIRING ROD CHGR

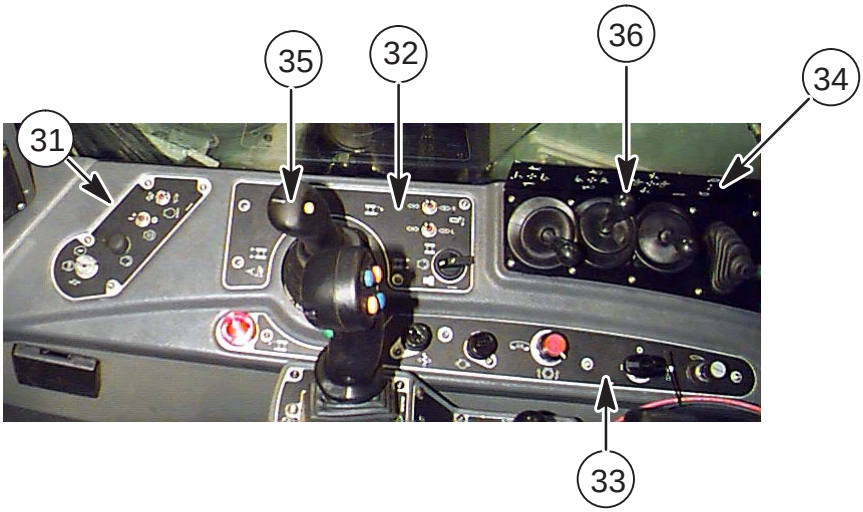


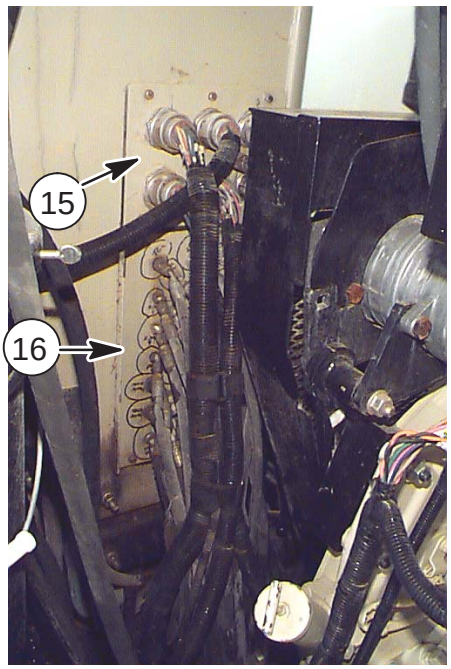
52330891 OPERATOR'S CAB ASSEMBLY



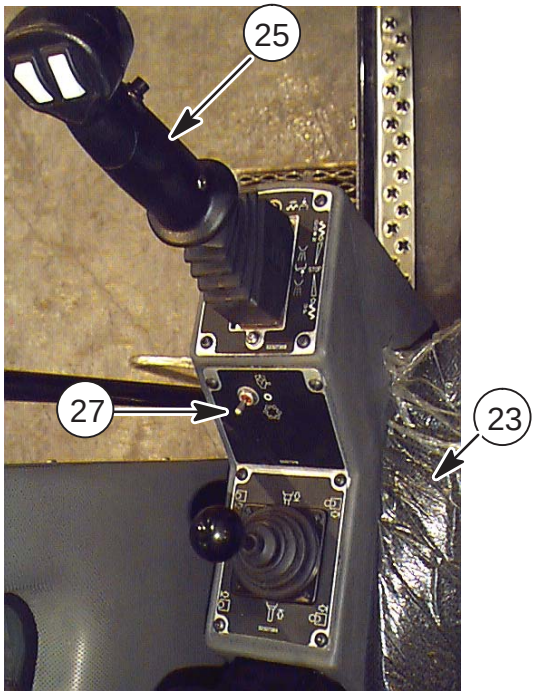


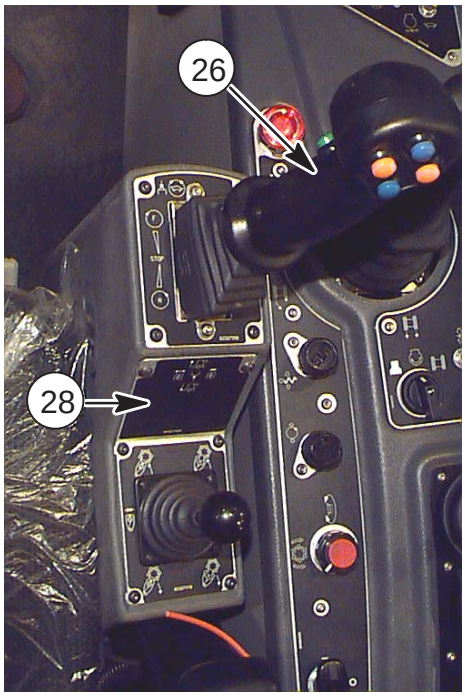
52330891 OPERATOR'S CAB ASSEMBLY





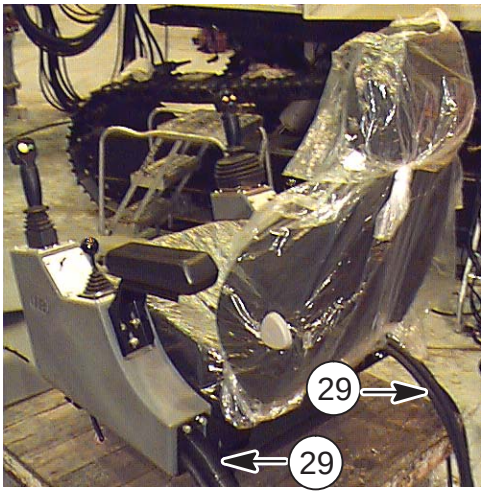
BACK OF CAB

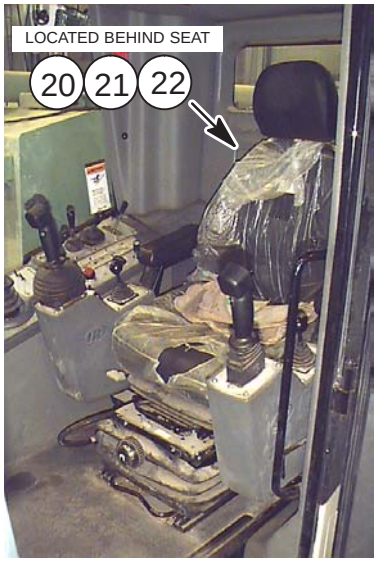


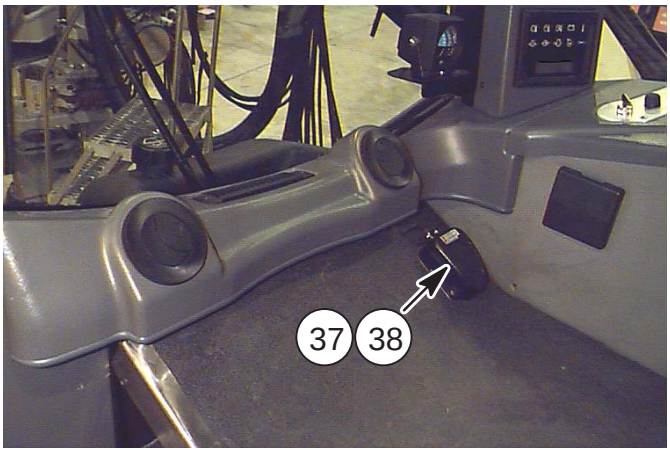


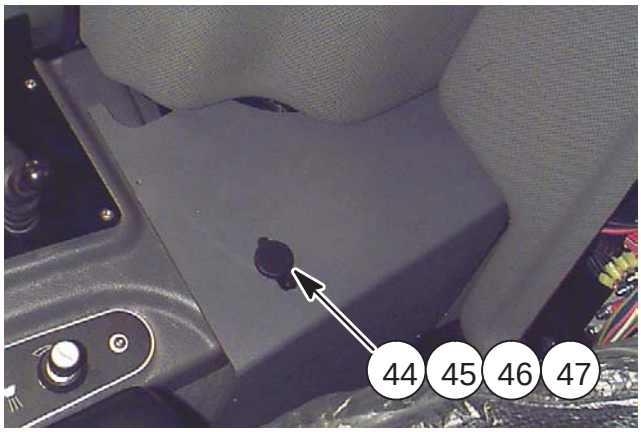
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

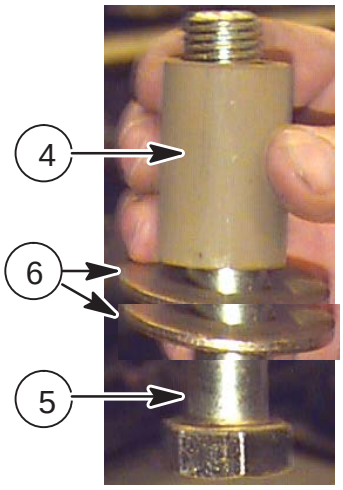
52330891 OPERATOR'S CAB ASSEMBLY





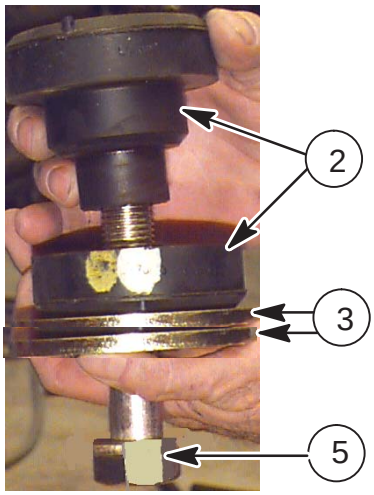






CAB RETAINERS (8 REQD.)

12 (NOT SHOWN)
18 (NOT SHOWN)
19 (NOT SHOWN)
49 (NOT SHOWN)
50 (NOT SHOWN)
51 (NOT SHOWN)
52 (NOT SHOWN)



CAB ISOLATORS (4 REQD.)

52330891 OPERATOR'S CAB ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52321247	1	CAB, OPERATOR'S *REFER TO PAGE 13.1–1*	
2	52086162	4	ISOLATOR, CAB	
3	52086188	8	WASHER, ISOLATOR	
4	52086170	8	SPACER, CAB RETAINER	
5	96727052	12	BOLT, HEX. HD.	
6	52105483	16	WASHER, FLAT	
7	52123486	1	MIRROR, WEST COAST	
8	51994762	2	BRACKET, MIRROR	
9	52123387	2	BRACKET, MIRROR	
10	96728571	4	BOLT, FLANGED HD.	
11	96727706	4	LOCKNUT, FLANGED HD.	
12	52324753	1	CABLE, GROUND	
13	96726815	1	LOCKNUT, FLANGED HD.	
14	51789220	3	LIGHT, DRILL	
15	52325214	1	ASSEMBLY, ELECTRICAL BULKHEAD *REFER TO PAGE 13.2–1*	
16	52325222	1	ASSEMBLY, HYDRAULIC BULKHEAD *REFER TO PAGE 13.3–1*	
18	52325347	4	FITTING, PRESSURE TEST UNION	
19	52322856	1	HARNESS, MAIN CAB WIRING	
20	52322898	1	ASSEMBLY, FUSE/RELAY PANEL (LOCATED ON WALL BEHIND OPERATOR'S SEAT) *REFER TO PAGE 13.5–1*	
21	95929006	6	CAPSCREW, HEX. HD. (USED FOR MOUNTING FUSE/RELAY PANEL)	
22	96702519	6	WASHER, FLAT (USED FOR MOUNTING FUSE/RELAY PANEL)	
23	52325578	1	SEAT, OPERATOR'S CAB *REFER TO PAGE 13.6–1*	
24	96714621	4	CAPSCREW, SOC. HD.	
25	52330909	1	ASSEMBLY, LEFT FRONT SEAT POD PANEL *REFER TO PAGE 13.7–1*	
26	52330917	1	ASSEMBLY, RIGHT FRONT SEAT POD PANEL *REFER TO PAGE 13.4–1*	
27	52330925	1	ASSEMBLY, LEFT REAR SEAT POD PANEL *REFER TO PAGE 13.15–1*	
28	52330933	1	ASSEMBLY, RIGHT REAR SEAT POD PANEL *REFER TO PAGE 13.16–1*	
29	52326980	1	SLEEVE, NYLON ABRASION	
30	52330941	1	ASSEMBLY, CORNER GAUGE PANEL *REFER TO PAGE 13.9–1*	

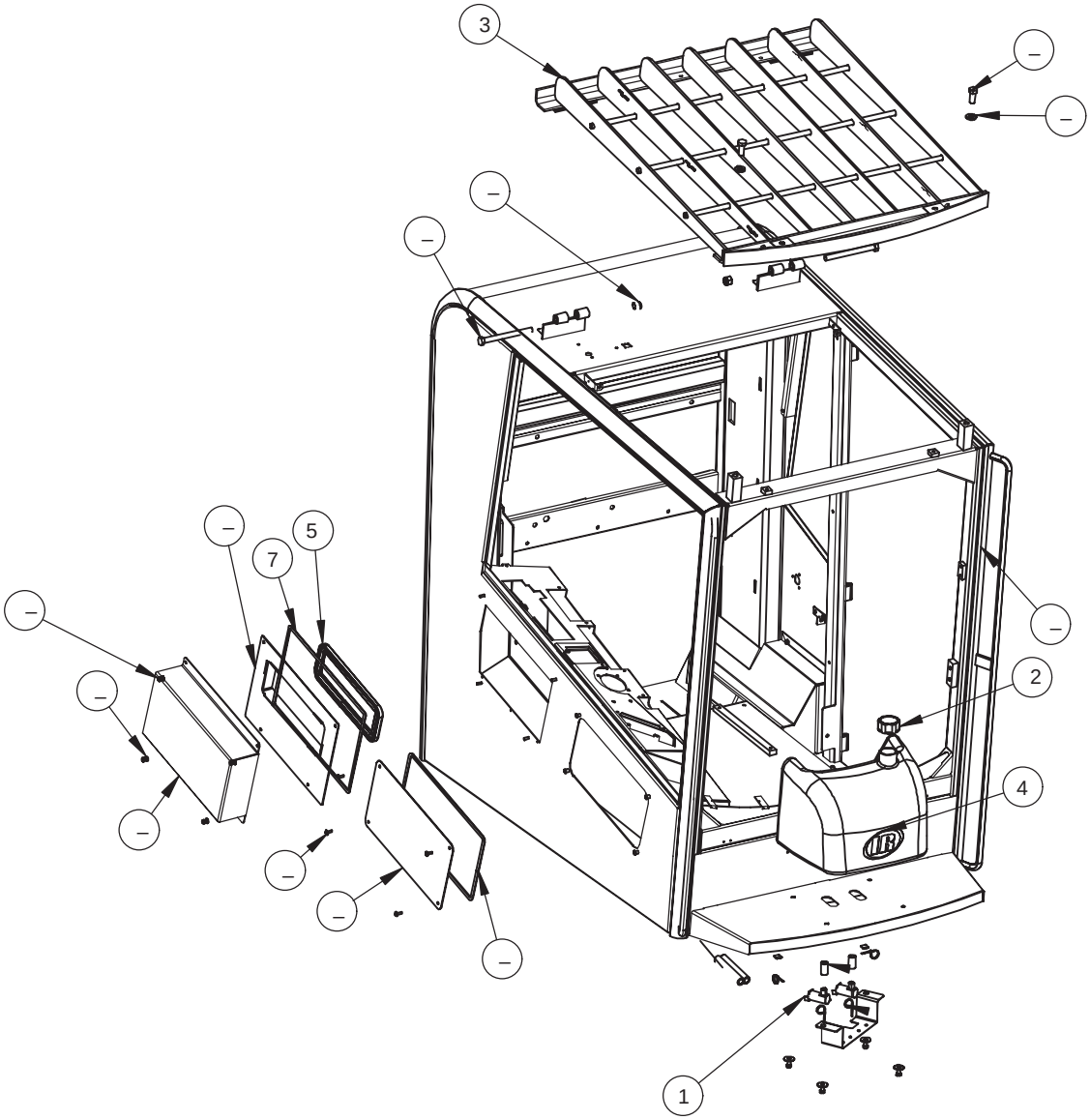
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52330891 OPERATOR'S CAB ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
31	52325396	1	ASSEMBLY, ENGINE IGNITION PANEL *REFER TO PAGE 13.10–1*	
32	52325420	1	ASSEMBLY, DRILL/TRAM SELECTION JOYSTICK PANEL *REFER TO PAGE 13.11–1*	
33	52325438	1	ASSEMBLY, SIDE CONTROL PANEL *REFER TO PAGE 13.12–1*	
34	52330958	1	ASSEMBLY, POSITIONING CONTROL VALVE PANEL *REFER TO PAGE 13.14–1*	
35	52314473	1	ASSEMBLY, TRAM CONTROL JOYSTICK *REFER TO PAGE 13.13–1*	
36	52314465	1	ASSEMBLY, POSITIONING VALVE *REFER TO PAGE 9.62–1*	
37	52105384	1	SWITCH, GREASER FOOT	
38	95994711	2	CAPSCREW, BUTTON HD.	
39	53076576	1	INCLINOMETER	
40	96705728	2	CAPSCREW, HEX. HD.	
41	96715008	2	LOCKNUT, HEX.	
42	96702493	4	WASHER, FLAT	
43	51994598	2	TAPE, ADHESIVE TRACTION	
44	52105459	1	SOCKET	
45	96727953	2	CAPSCREW	
46	96703756	2	LOCKNUT	
47	52323037	1	HARNESS, 12V POWER OUTLET WIRING	
48	52330834	1	ASSEMBLY, SAFETY MANUAL/CABLE	
49	58150251	6	TERMINAL, FEMALE	
50	58150244	6	TERMINAL,MALE	
51	95365367	9	TERMINAL,RING	
52	57443954	3	KIT,LIGHT GAUGE–24VDC	

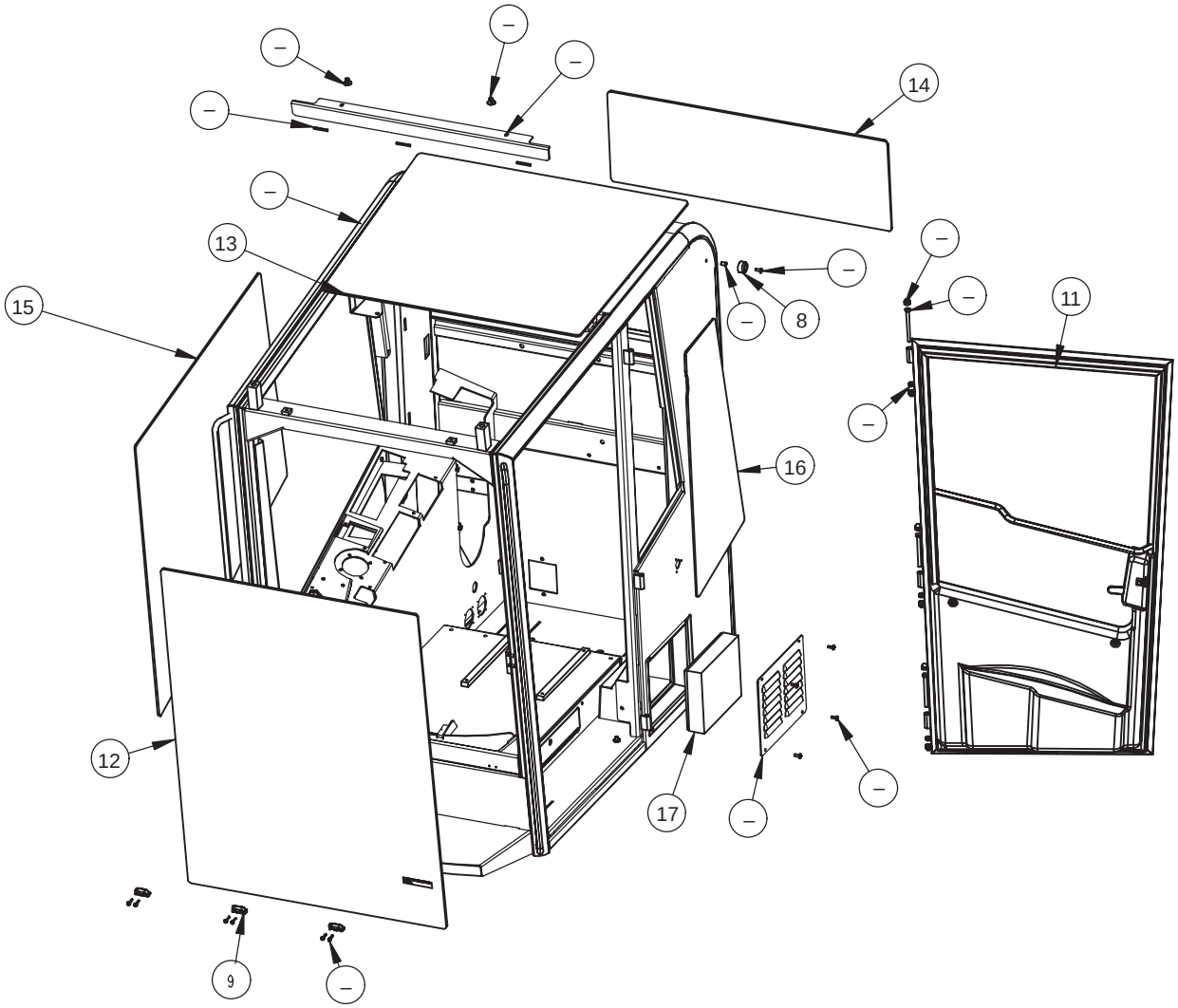
Ingersoll-Rand

52321247 OPERATOR'S CAB



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52331212	2	PUMP, WINDSHIELD WASHER	
2	52331220	1	CAP, WINDSHIELD WASHER BOTTLE	
3	52319902	1	WELDMENT, FOPS	
4	52318342	1	BOTTLE, WINDSHIELD WASHER	
5	52320017	1	SEAL, HYDRAULIC VALVE COVER	
6	52320025	1	SEAL, EXTERIOR ACCESS COVER	
7	52320033	1	SEAL, HYDRAULIC COVER	

52321247 OPERATOR'S CAB

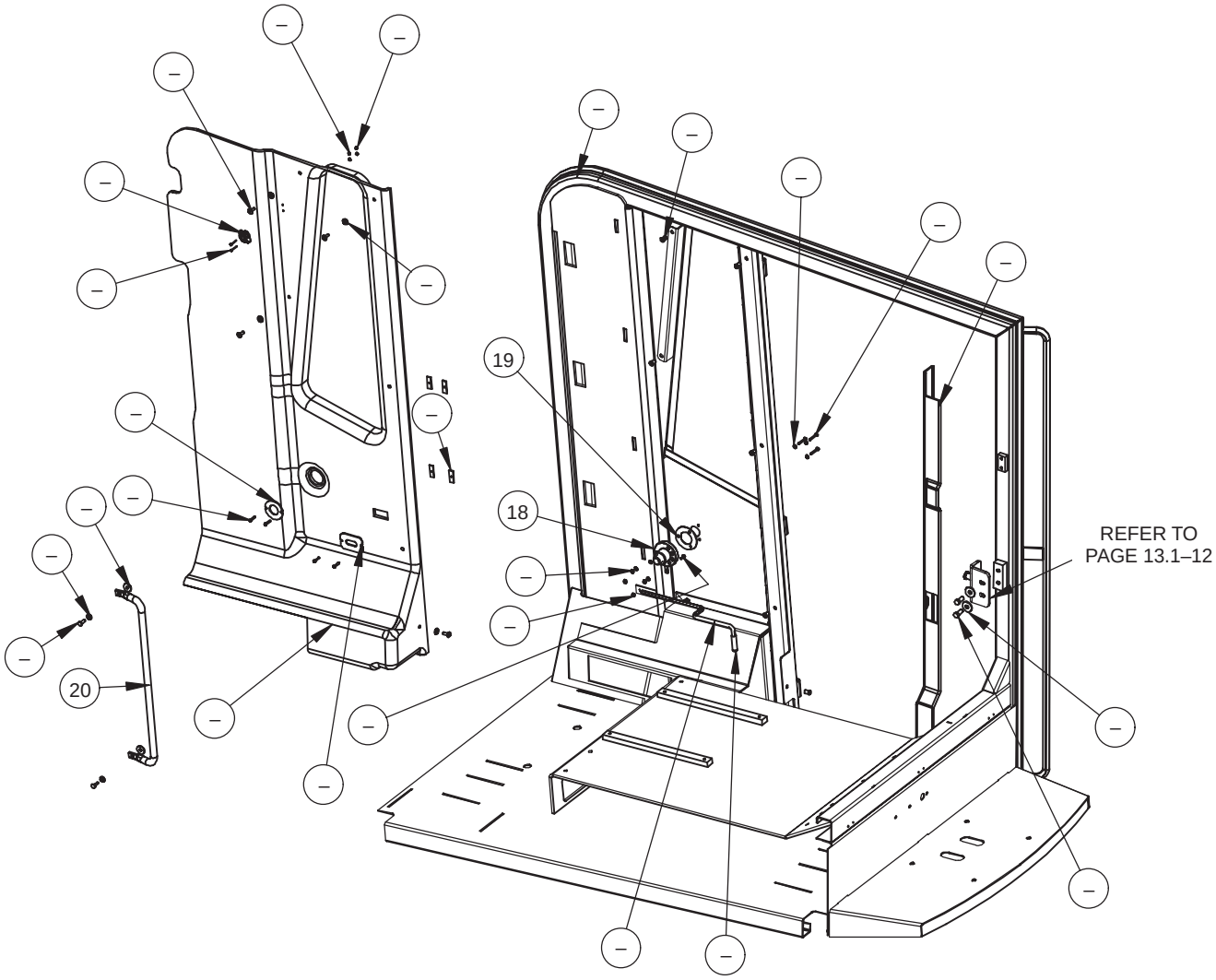


REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
8	52331139	1	BUMPER, RUBBER	
9	52331147	3	CLIP, WINDOW	
11	52319910	1	ASSEMBLY, DOOR	
			REFER TO PAGE 13.1–3	
12	52318508	1	WINDOW, FRONT	
13	52318516	1	WINDOW, SKY LIGHT	
14	52318524	1	WINDOW, REAR	
15	52318532	1	WINDOW, RIGHT HAND SIDE	
16	52318540	1	WINDOW, LEFT HAND SIDE	
17	52319886	2	FILTER, AIR	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

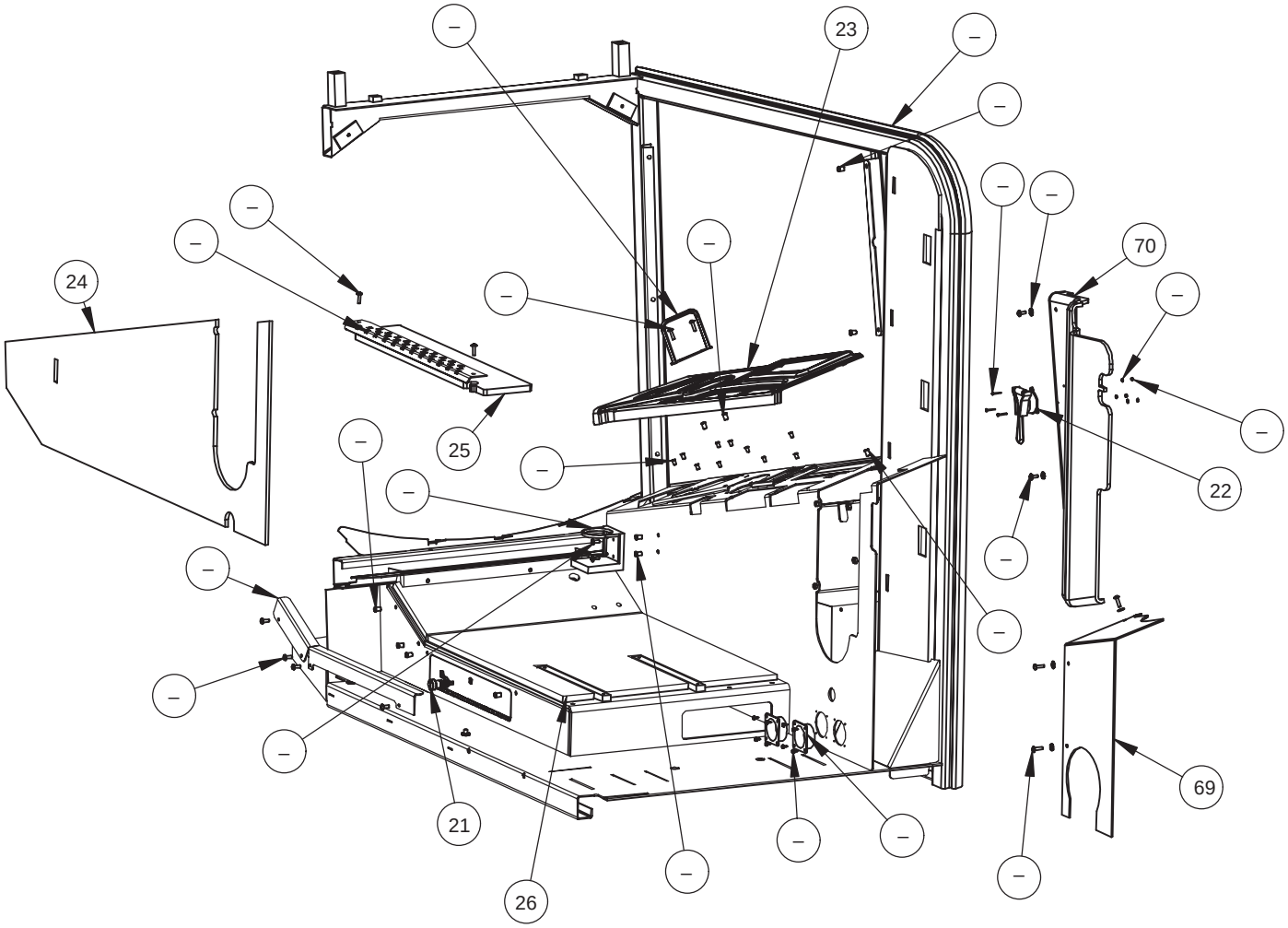
Ingersoll Rand

52321247 OPERATOR'S CAB



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
18	52331204	1	HOLD–OPEN, DOOR	
19	52331246	1	SEAL, DOOR HOLD–OPEN	
20	52320009	1	HANDLE, DOOR POST GRAB	

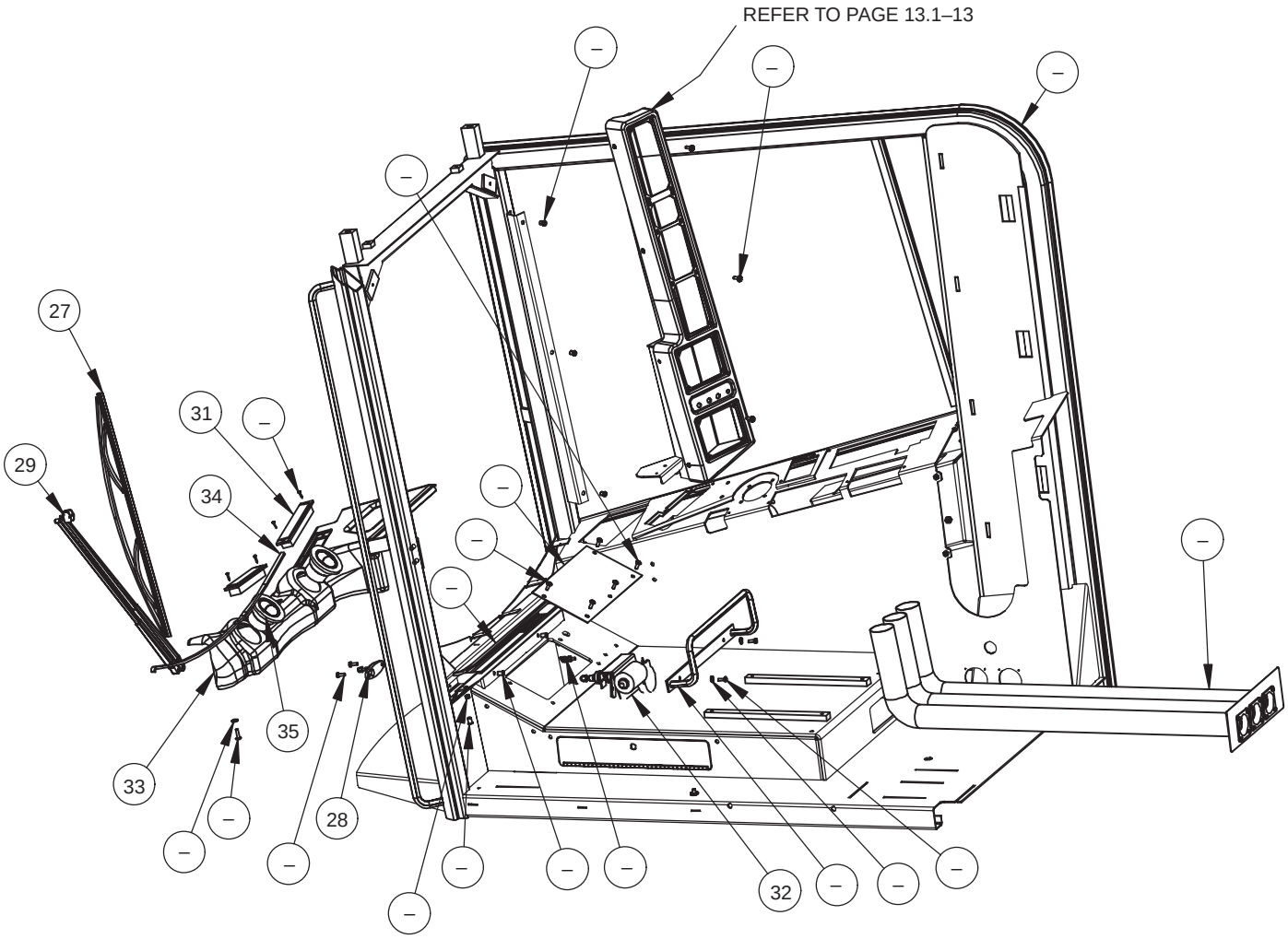
52321247 OPERATOR'S CAB



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
21	52083151	1	LATCH, ARROWHEAD	
22	52331154	1	HAMMER, EMERGENCY EXIT (WITH CABLE)	
23	52318383	1	COVER, FRONT RIGHT HAND CONSOLE	
24	52318581	1	FOAM, RH CONSOLE (ALSO INCLUDES LOWER DOOR PANEL FOAM)	
25	52319852	1	FLOORMAT, LOWER	
26	52319860	1	FLOORMAT, PEDESTAL	
69	52318391	1	COVER, RH CONSOLE REAR PLASTIC/FOAM	
70	52318466	1	PANEL, RH SIDE CLOSE-OUT PLASTIC/FOAM	

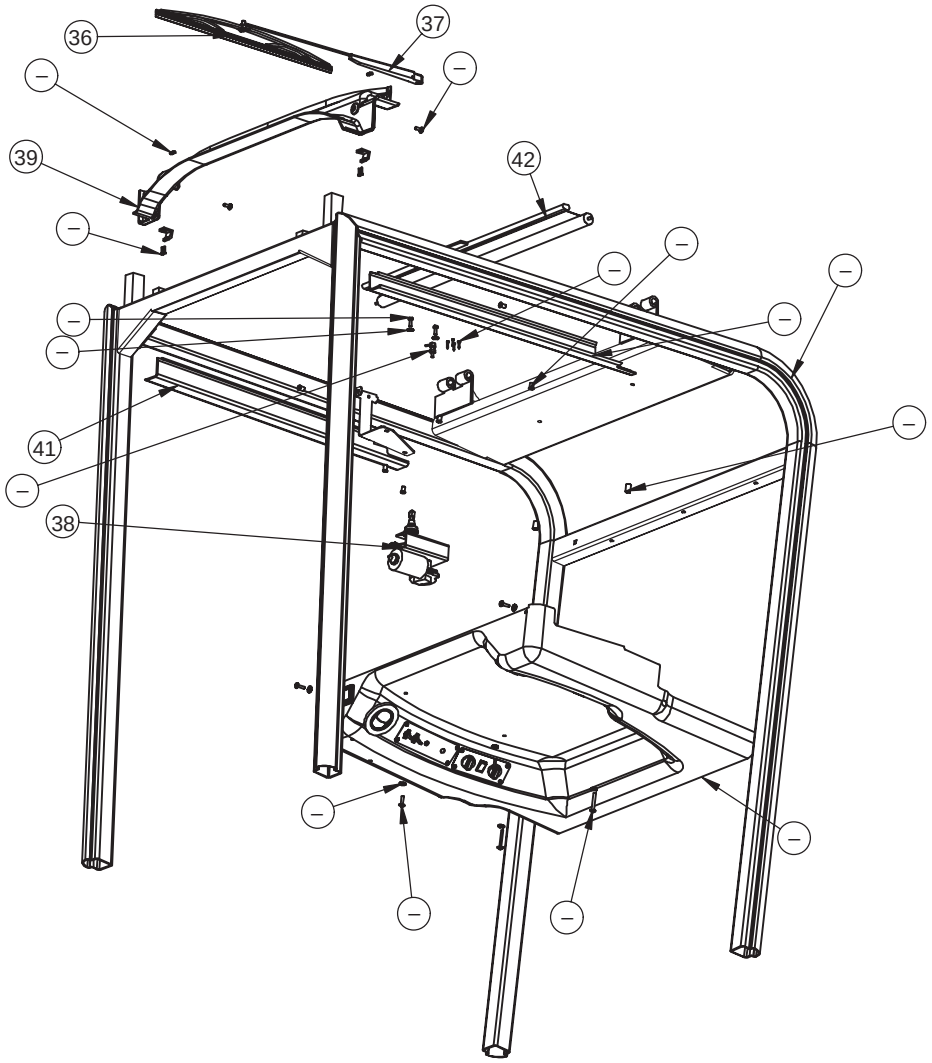
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52321247 OPERATOR'S CAB



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
27	57541138	1	BLADE, WIPER (28")	
28	52331121	1	PLATE, PIVOT ASSEMBLY MOUNTING	
29	57541153	1	ARM, WIPER (28")	
31	52331238	2	LOUVER, RECTANGULAR	
32	52319936	1	ASSEMBLY, WIPER MOTOR (FRONT)	
33	52318417	1	COVER, FRONT LOWER PLASTIC	
34	52319993	1	SEAL, FRONT DUCT UPPER	
35	52106515	2	LOUVER, ROUND (4")	

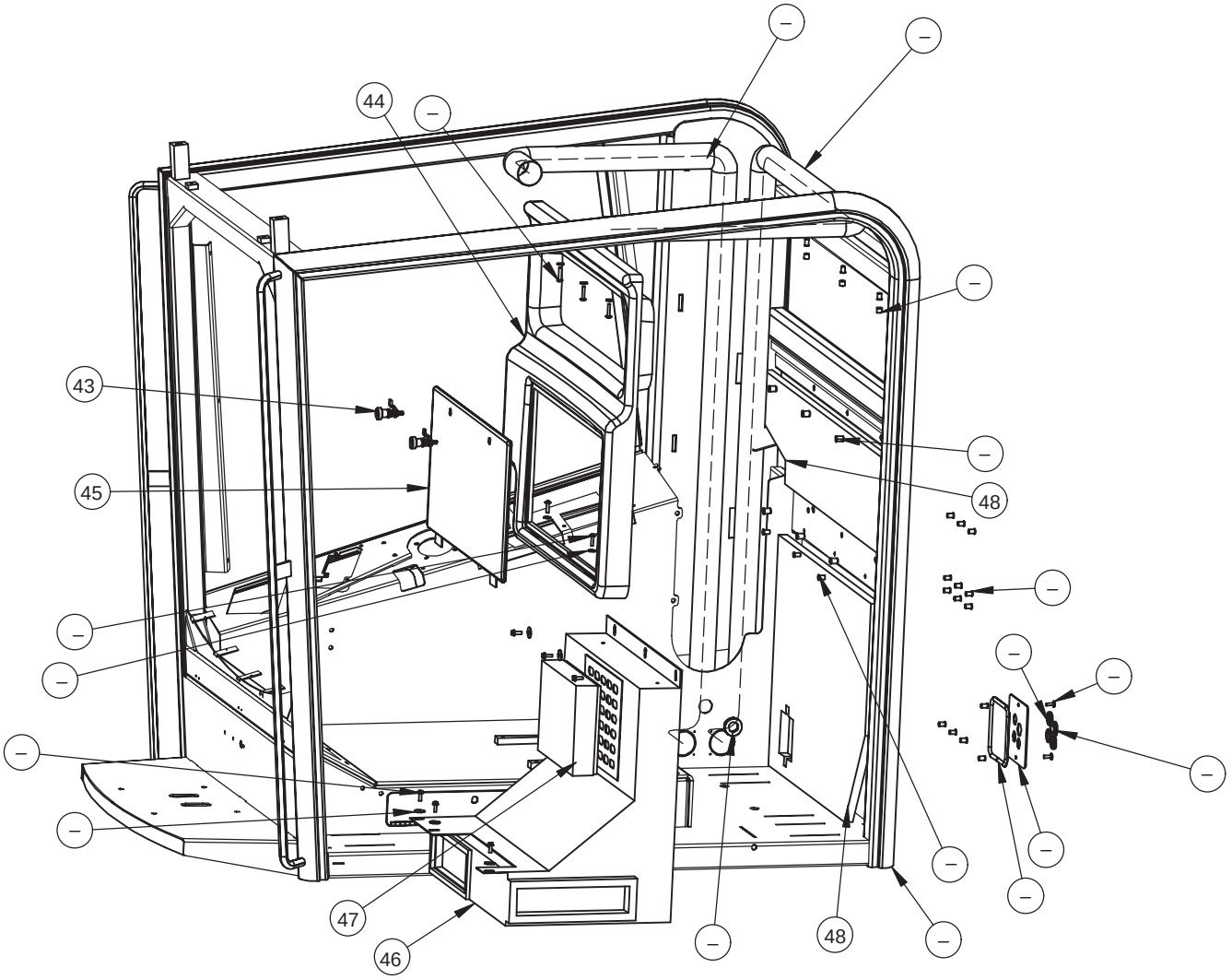
52321247 OPERATOR'S CAB



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
36	52331113	1	BLADE, WIPER (SKY LIGHT)	
37	52125861	1	ARM, WIPER (SKY LIGHT)	
38	52319928	1	ASSEMBLY, WIPER MOTOR (SKY LIGHT)	
39	52318409	1	COVER, FRONT UPPER PLASTIC	
40	52318433	1	COVER, UPPER LONG (LH)	
41	52318441	1	COVER, UPPER LONG (RH)	
42	52320066	1	BLIND, ROLLER	

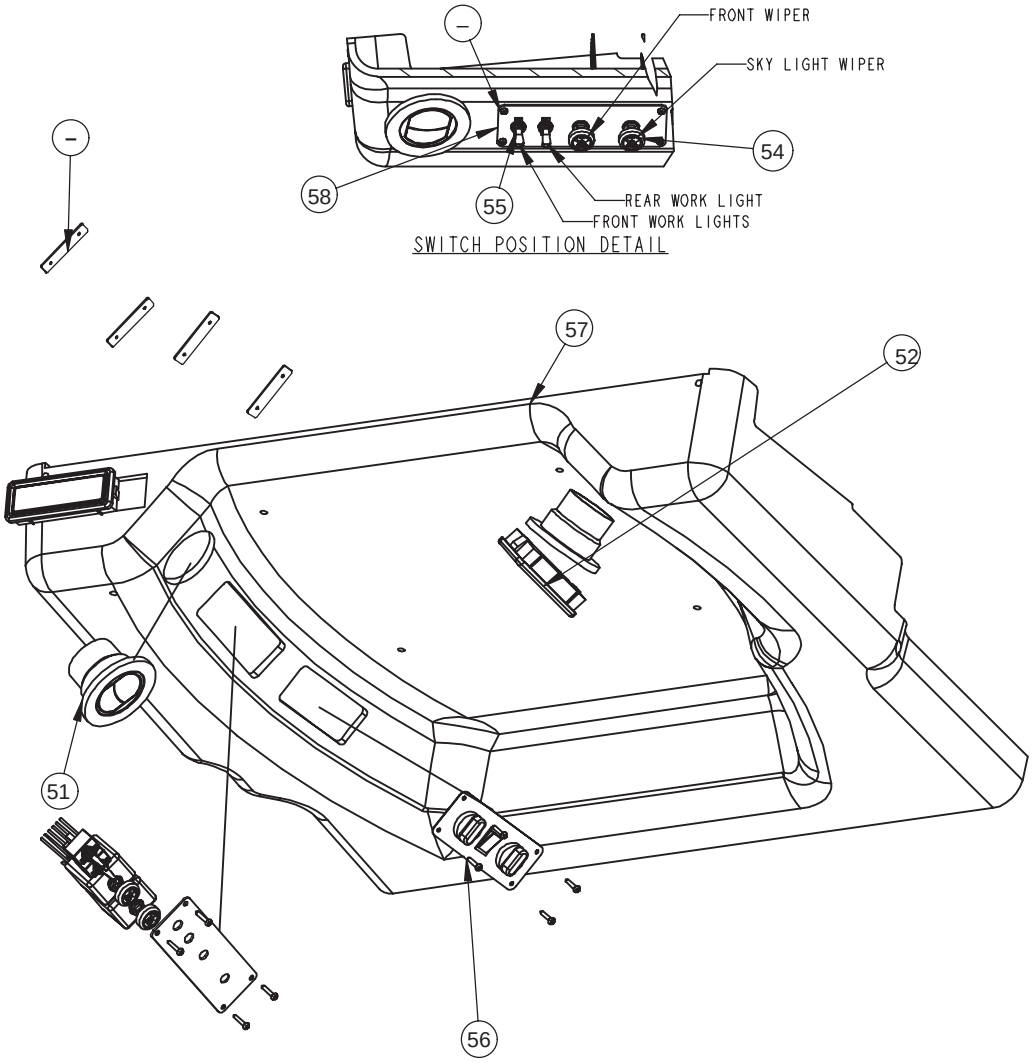
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52321247 OPERATOR'S CAB



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
43	52083151	2	LATCH, ARROWHEAD	
44	52318474	1	PANEL, CLOSE–OUT REAR	
45	52318482	1	PANEL, REAR ELECTRICAL ACCESS	
46	52319878	1	SYSTEM, HEAT & A/C AIR *REFER TO PAGE 13.8–1*	
47	52319886	1	FILTER, AIR	
48	52318565	1	FOAM, REAR BOTTOM/UPPER	

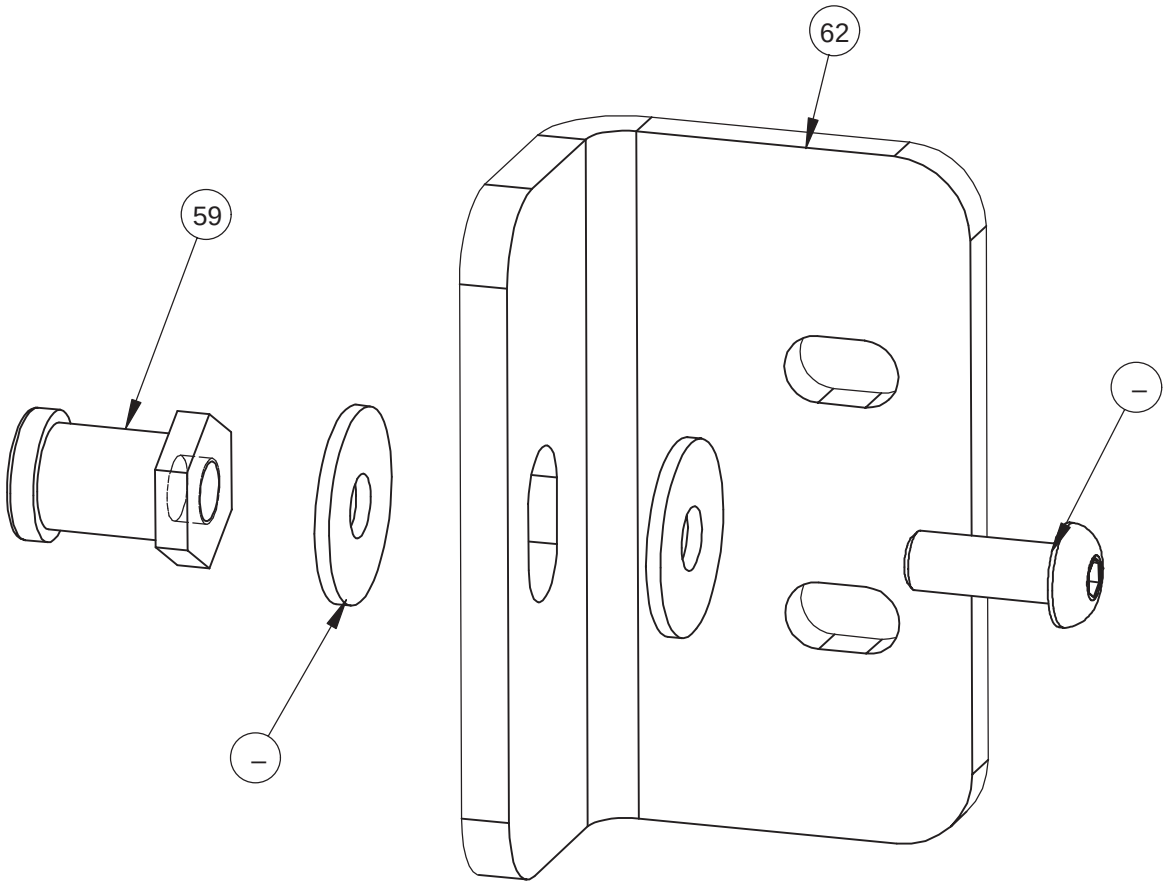
52321247 OPERATOR'S CAB



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
51	52106515	2	LOUVER, ROUND (4")	
52	52331162	2	DOMELIGHT	
54	51618379	2	SWITCH, WIPER	
55	57179608	2	SWITCH, TOGGLE	
56	52331196	1	PANEL, HEAT/AC CONTROL	
57	52318367	1	HEADLINER	
58	52320058	1	PLATE, SWITCH	

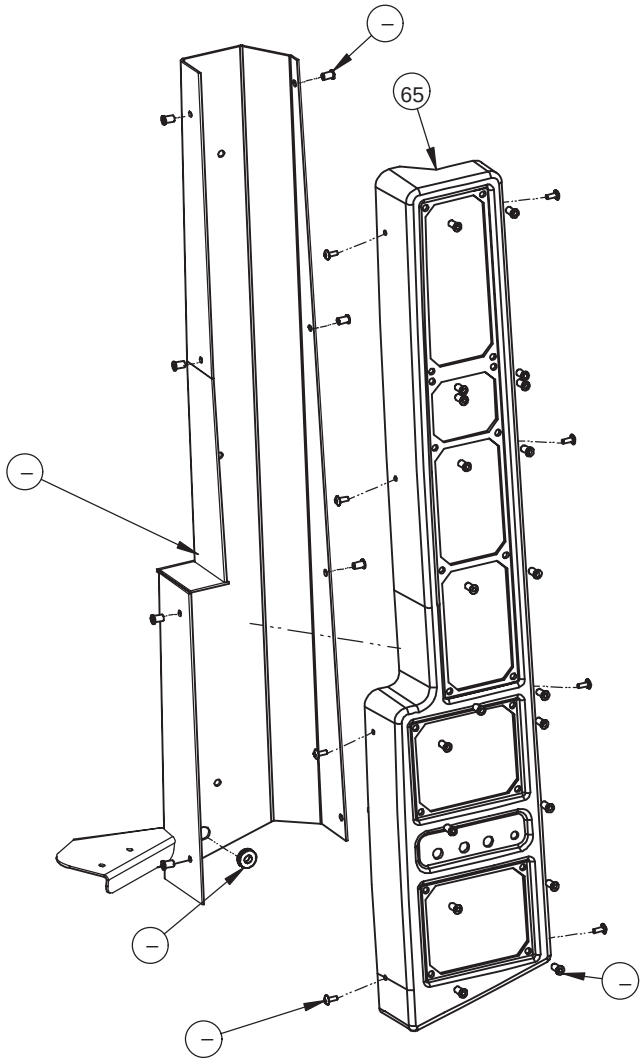
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52321247 OPERATOR'S CAB



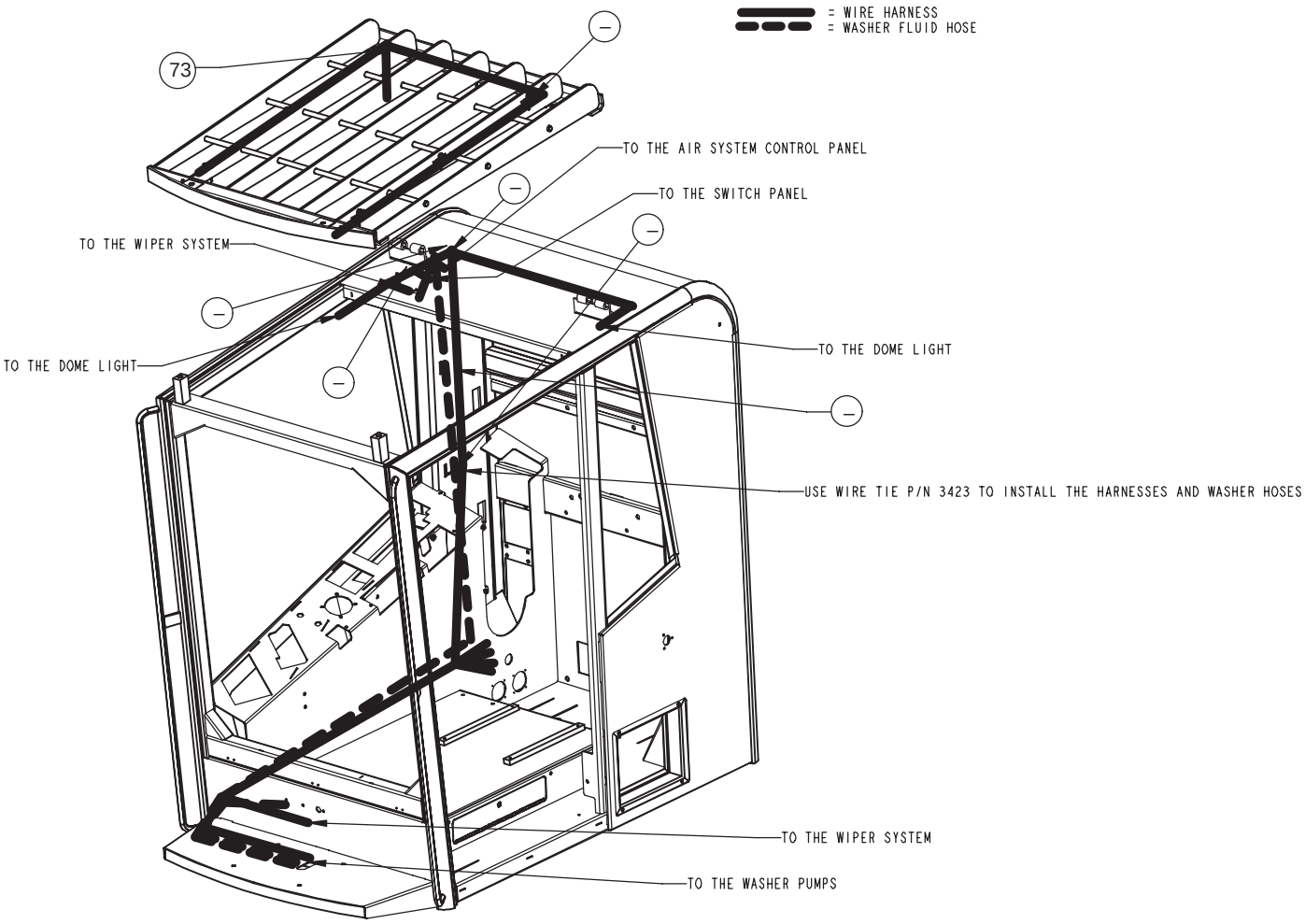
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
59	52331105	1	STRIKER	
62	52319944	1	MOUNTING, STRIKER BOLT	

52321247 OPERATOR'S CAB



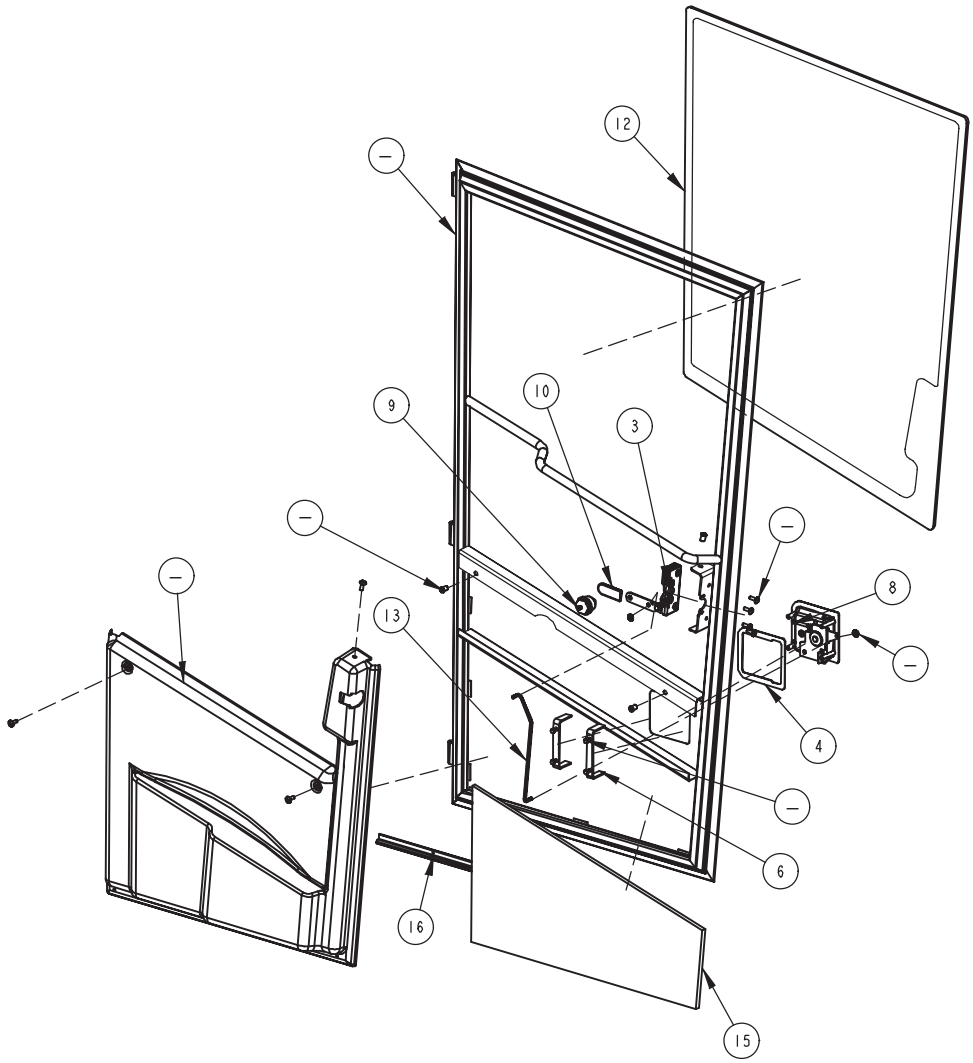
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
65	52318375	1	PANEL, CORNER PLASTIC GAUGE	

52321247 OPERATOR'S CAB



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
73	52319977	1	HARNESS, CAB FOPS (LIGHTS)	

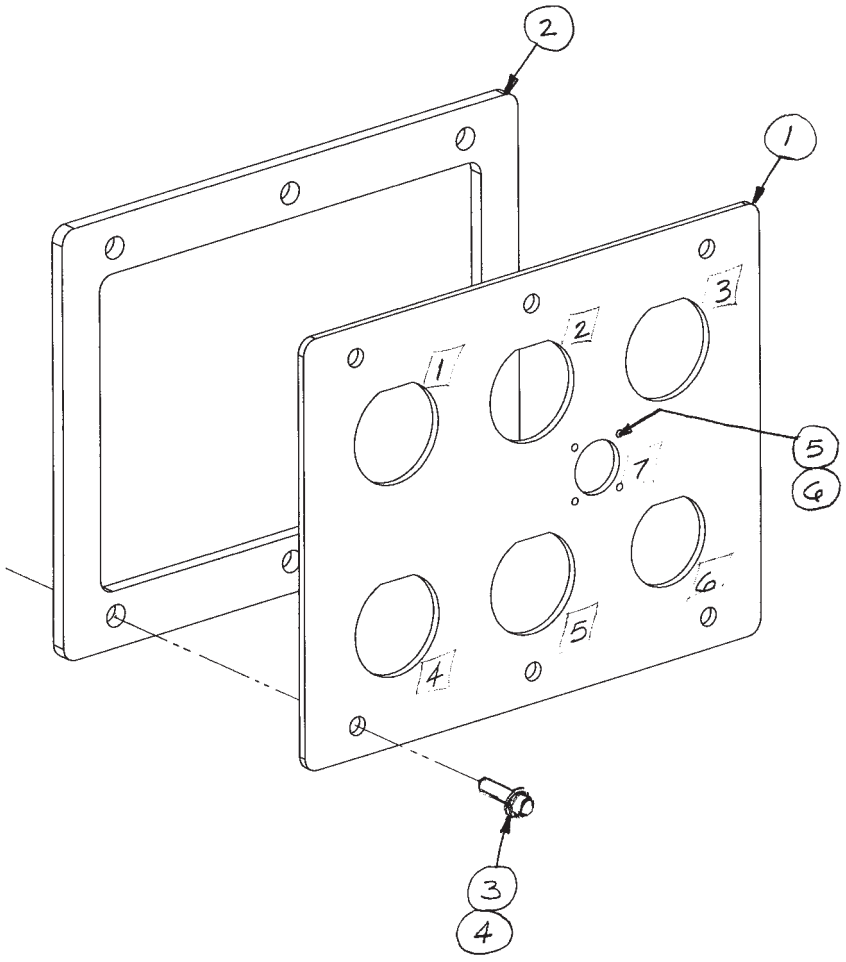
52319910 DOOR ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
3	52331097	1	LATCH, CAM (RH)	
4	57561581	1	LATCH, GASKET	
6	52106630	2	BRACKET, MOUNTING	
8	52126455	1	ASSEMBLY, PADDLE HANDLE	
9	52331170	1	HOLD–OPEN, DOOR	
10	52331188	1	GRIP, VINYL HANDLE	
12	52318557	1	WINDOW, DOOR	
13	52319951	1	ROD, DOOR RELEASE	
15	52319845	1	FOAM, LOWER DOOR	
16	52320041	1	SEAL, DOOR (BOTTOM)	

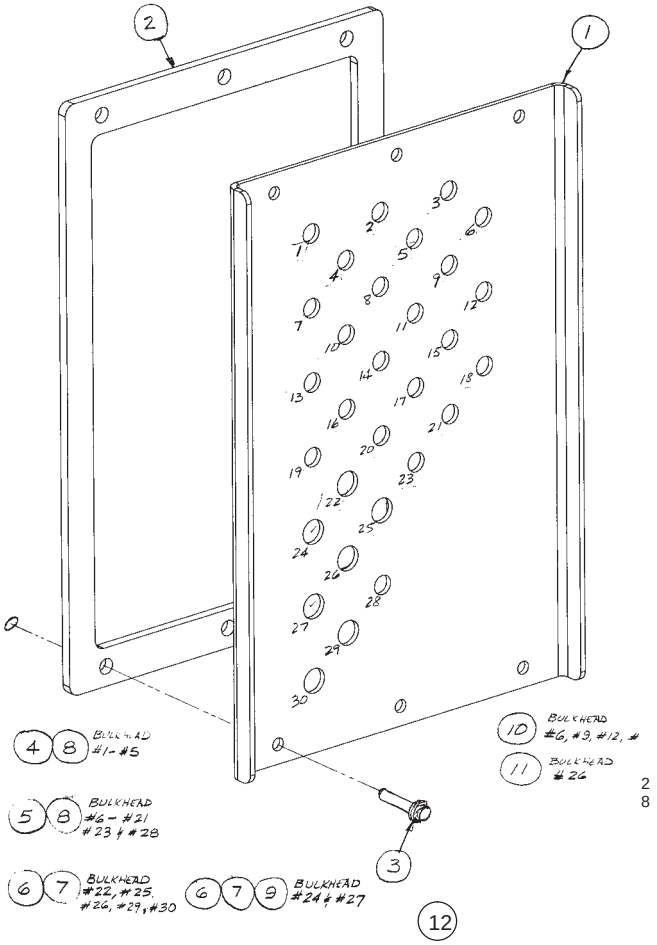
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52325214 ELECTRICAL BULKHEAD ASSEMBLY



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52318730	1	BULKHEAD, ELECTRICAL (UPPER)	
2	52318755	1	GASKET, ELECTRICAL BULKHEAD (UPPER)	
3	95934816	6	CAPSCREW, HEX. HD.	
4	95922324	6	WASHER, FLAT	
5	95475869	4	SCREW, MACHINE	
6	95475877	4	WASHER, LOCK	
7	95187613	4	NUT, HEX MACHINE	

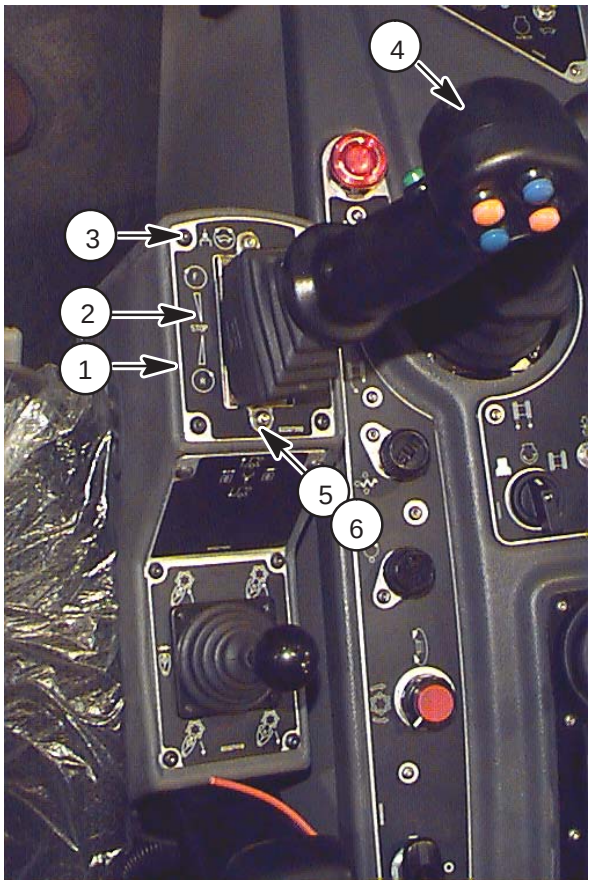
52325222 HYDRAULIC BULKHEAD ASSEMBLY

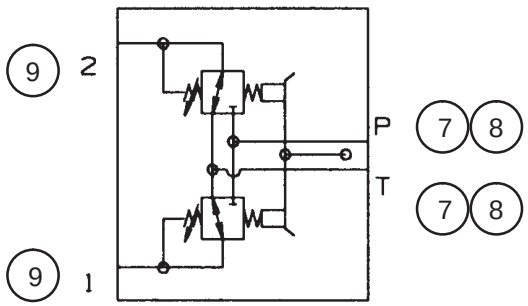


REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52318748	1	BULKHEAD, HYDRAULIC (LOWER)	
2	52318763	1	GASKET, BULKHEAD (LOWER)	
3	95934816	6	CAPSCREW	
4	52325248	5	FITTING, BULKHEAD TEST	
5	95371704	18	ADAPTER, BULKHEAD	
6	95278909	7	ADAPTER, BULKHEAD	
7	95866513	14	WASHER, INTERNAL TOOTH LOCK	
8	95248100	46	WASHER, INTERNAL TOOTH LOCK	
9	95415667	2	ADAPTER, TEE	
10	95257333	16	CAP	
11	95257341	2	CAP	
12	95922324	6	WASHER, FLAT	
14	51027928	2	ADAPTER	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52330917 RIGHT FRONT SEAT POD PANEL ASSEMBLY

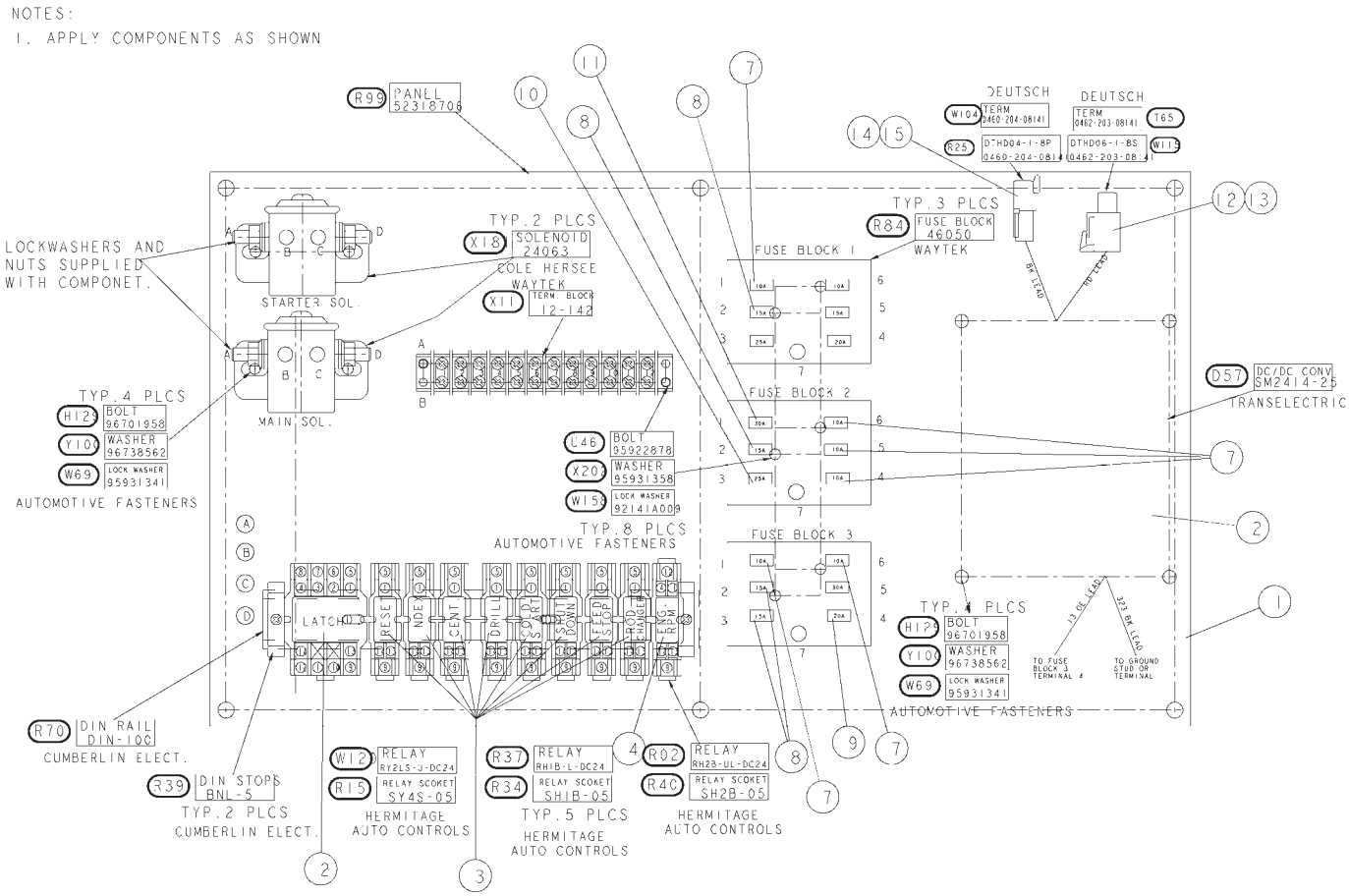




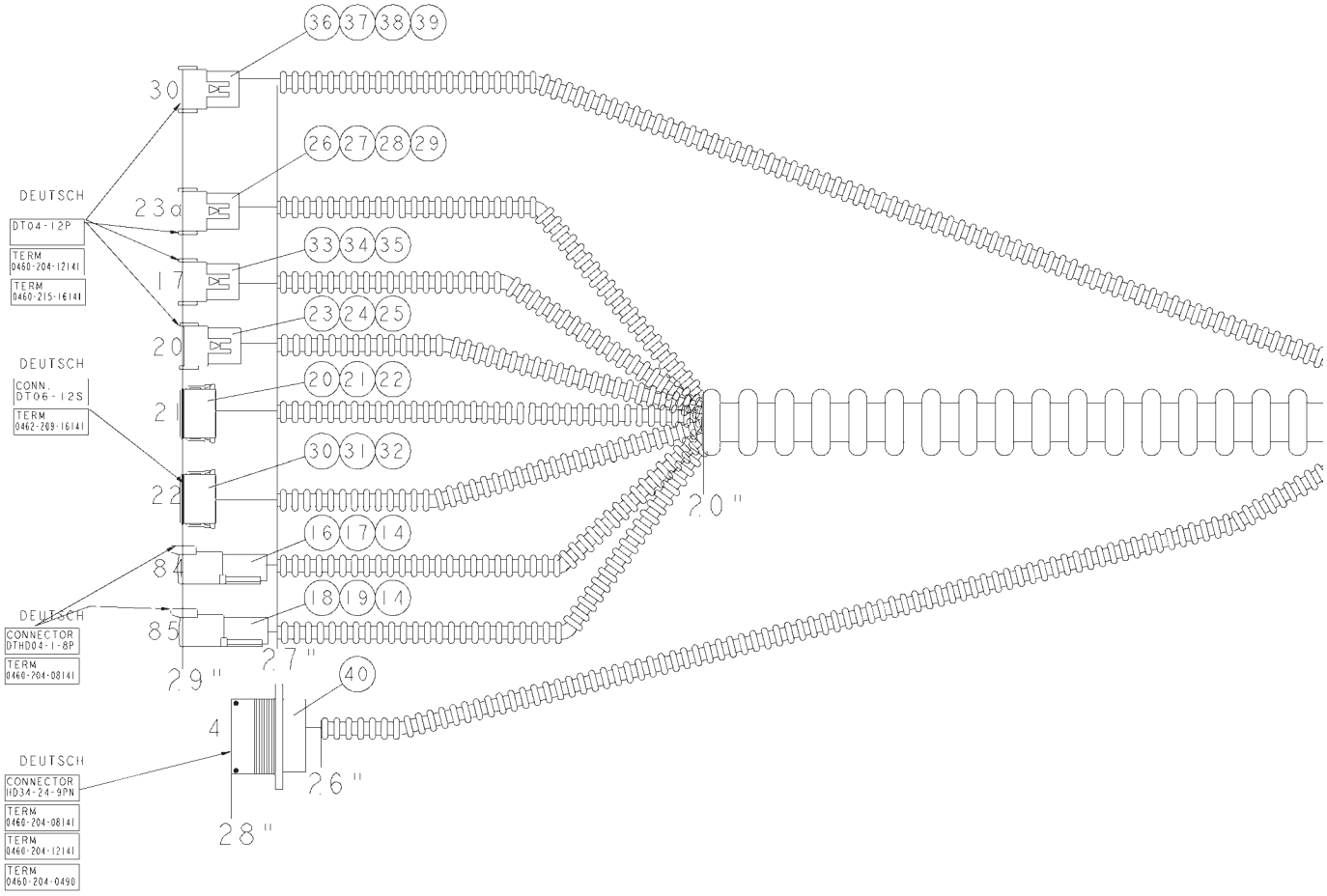
52330917 RIGHT FRONT SEAT POD PANEL ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52316791	1	PANEL, ROTATION CONTROL VALVE	
2	52327392	1	DECAL, ROTATION CONTROL	
3	95917456	4	CAPSCREW, BUTTON HD. HEX. SOCKET	
4	52324902	1	VALVE, ROTATION CONTROL *REFER TO PAGE 9.51–1*	
5	96727995	2	CAPSCREW, BUTTON HD. HEX. SOCKET	
6	96726781	2	LOCKNUT, FLANGED HD.	
7	95666996	2	PLUG, PORT	
8	95329975	2	ADAPTER	
9	95371258	2	ADAPTER	

52322898 FUSE/RELAY PANEL ASSEMBLY



52322898 FUSE/RELAY PANEL ASSEMBLY

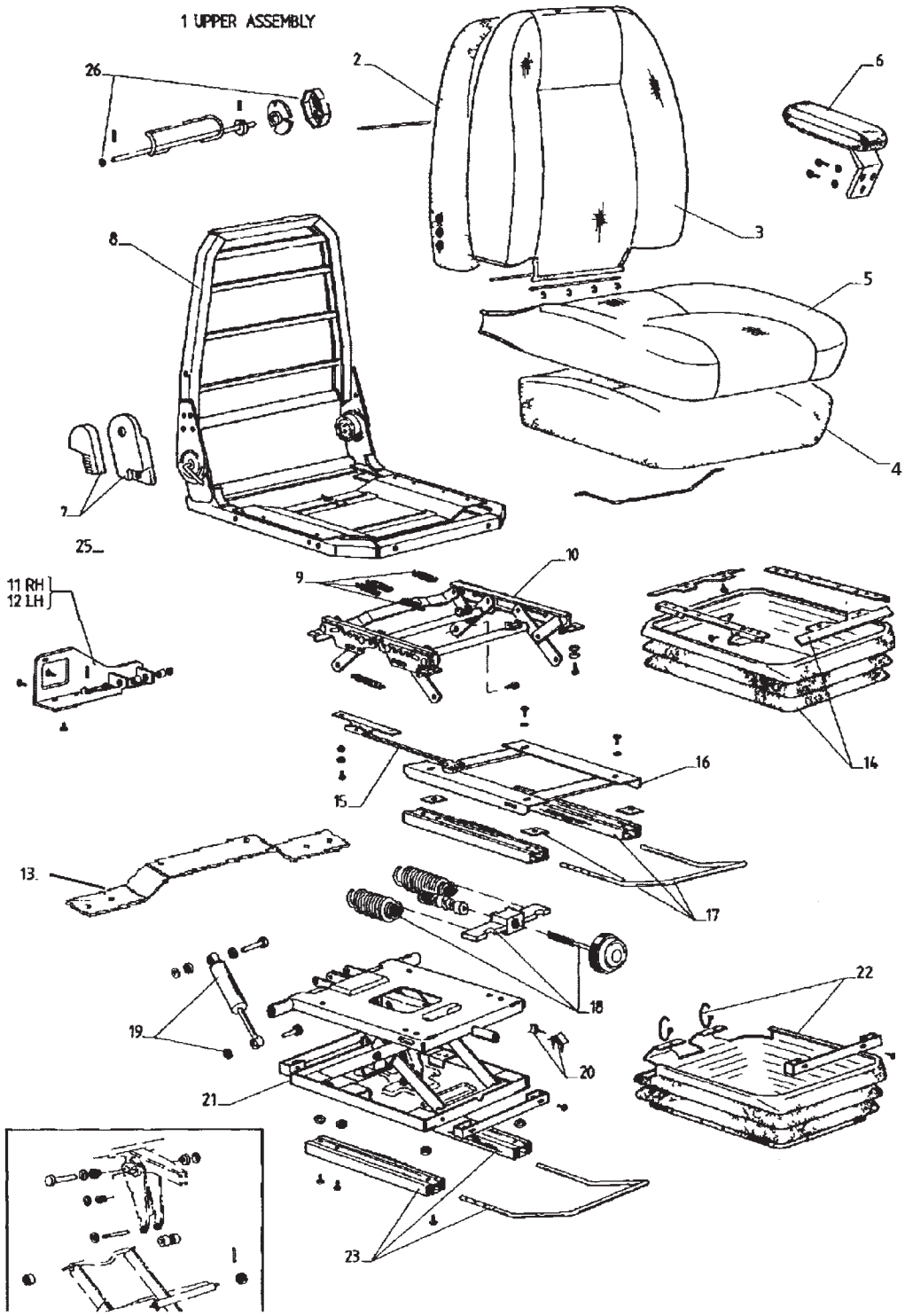


Ingersoll-Rand

52322898 FUSE/RELAY PANEL ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52318706	1	PANEL, MOUNTING	
2	52105400	1	CONVERTER, 24 VDC TO 12 VDC	
3	51913077	8	RELAY, ELECTRICAL (SPDT)	
4	51786333	1	RELAY, ELECTRICAL (DPDT)	
5	52283330	1	RELAY, ELECTRICAL (LATCHING)	
6	51619492	2	SOLENOID, POWER (SPST /NO)	
7	52116662	6	FUSE, ELECTRICAL (10 AMP)	
8	52116654	4	FUSE, ELECTRICAL (15 AMP)	
9	52116647	1	FUSE, ELECTRICAL (20 AMP)	
10	52135423	1	FUSE, ELECTRICAL (25 AMP)	
11	52117421	1	FUSE, ELECTRICAL (30 AMP)	
12	57709230	1	CONNECTOR,1 SKT CONTACT	
13	58818212	1	SOCKET,SIZE 8	
14	57709248	1	CONNECTOR,1 PIN CONTACT	
15	58797119	1	PIN,SIZE 8	
16	57709248	1	CONNECTOR,1 PIN CONTACT	
17	58797119	1	PIN,SIZE 8	
18	57709248	1	CONNECTOR,1 PIN CONTACT	
19	58797119	1	PIN,SIZE 8	
20	54651328	1	PLUG,12 CIRCUIT	
21	57386955	12	CONTACT, 14 AWG SOCKET	
22	54651344	1	WEDGE,SOCKETS	
23	54606595	1	RECEPTACLE,12 CIRCUIT	
24	59436840	12	PIN,SIZE 16	
25	54651351	1	WEDGE,PINS	
26	54606595	1	RECEPTACLE,12 CIRCUIT	
27	59436840	10	PIN,SIZE 16	
28	54651351	1	WEDGE,PINS	
29	57400004	2	PLUG, SEALING–SIZE 12	
30	54651328	1	PLUG,12 CIRCUIT	
31	57386955	12	CONTACT, 14 AWG SOCKET	
32	54651344	1	WEDGE,SOCKETS	
33	54606595	1	RECEPTACLE,12 CIRCUIT	
34	59436840	12	PIN,SIZE 16	
35	54651351	1	WEDGE,PINS	
36	54606595	1	RECEPTACLE,12 CIRCUIT	
37	59436840	11	PIN,SIZE 16	
38	54651351	1	WEDGE,PINS	
39	57400004	1	PLUG, SEALING–SIZE 12	
40	57691925	1	CONNECTOR PLUG	

52325578 OPERATOR'S CAB SEAT

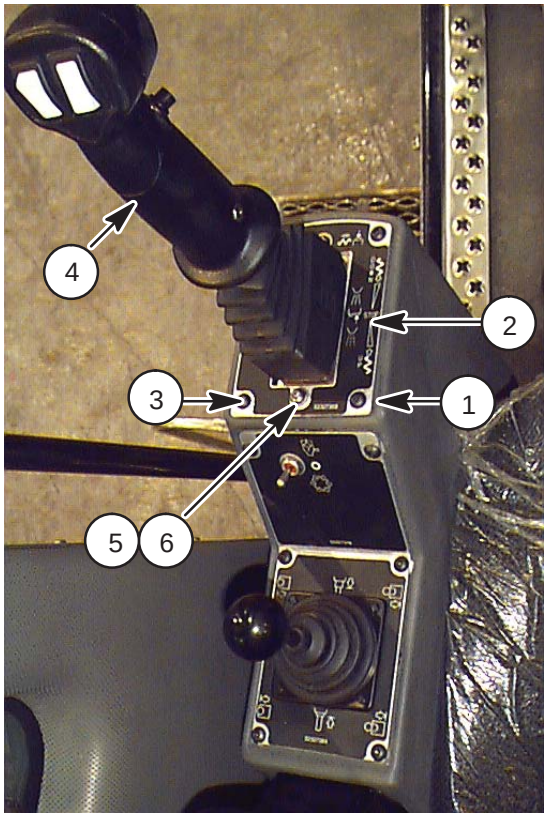


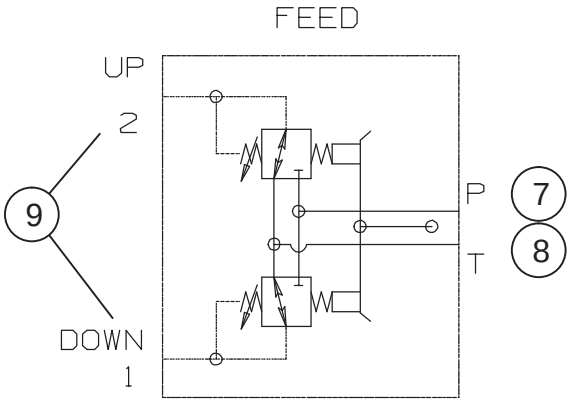
52325578 OPERATOR'S CAB SEAT

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
2	52330990	1	KIT, SEAT BACK FOAM	
3	52331006	1	KIT, SEAT BACK COVER	
4	52331014	1	KIT, SEAT FOAM	
5	52331022	1	KIT, SEAT COVER ASSEMBLY	
11	52331030	1	KIT, RH CONTROLS POD FIXING	
12	52331048	1	KIT, LH CONTROLS POD FIXING	
13	52331055	1	KIT, POD MOUNTING BRACKET	
18	52331063	1	KIT, WEIGHT ADJUSTMENT	
19	52331071	1	KIT, DAMPER ASSEMBLY	
20	57714685	1	SEAT BELT	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52330909 LEFT FRONT SEAT POD PANEL ASSEMBLY





52330909 LEFT FRONT SEAT POD PANEL ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52316791	1	PANEL, FEED CONTROL VALVE	
2	52327368	1	DECAL, FEED CONTROL	
3	95917456	4	CAPSCREW, BUTTON HD. HEX. SOCKET	
4	52324894	1	VALVE, FEED CONTROL *REFER TO PAGE 9.59–1*	
5	96727995	2	CAPSCREW, BUTTON HD. HEX. SOCKET	
6	96726781	2	LOCKNUT, FLANGED HD.	
7	95666996	2	PLUG, PORT	
8	95329975	2	ADAPTER	
9	95371258	2	ADAPTER	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

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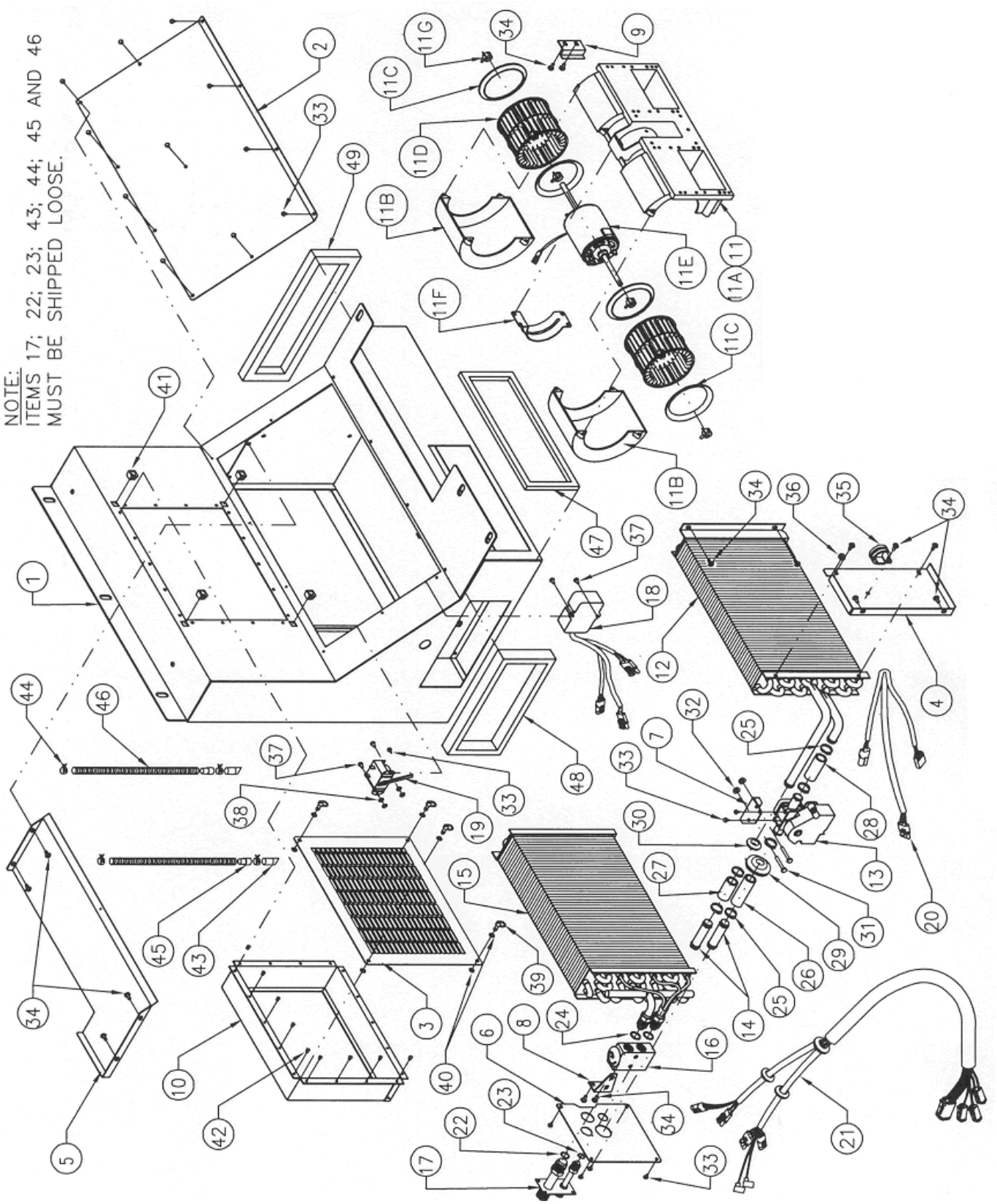
52319878 HEAT & A/C AIR SYSTEM

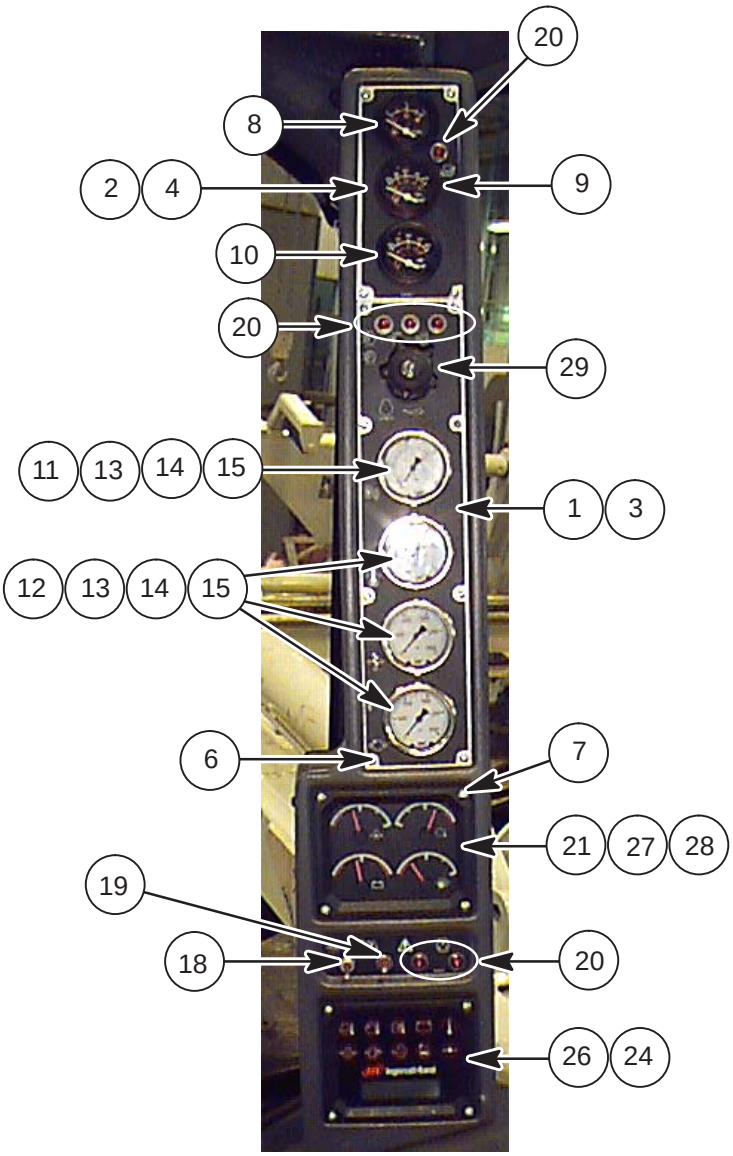


52319878 HEAT & A/C AIR SYSTEM

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
11	52331618	1	ASSEMBLY, BLOWER	
11D	52331626	2	.WHEEL, BLOWER	
11E	52331634	1	.MOTOR	
12	52331642	1	COIL, HEATER	
13	52331659	1	ASSEMBLY, MOTORIZED VALVE	
15	52331667	1	COIL, EVAPORATOR	
16	52331675	1	VALVE, BLOCK	
18	52331683	1	ASSEMBLY, BLOWER DRIVE	
19	52331691	1	THERMOSTAT	
20	52331709	1	HARNESS, WIRING	
21	52331717	1	HARNESS, WIRING	
22	52331725	1	O–RING	
23	52331733	1	O–RING	
24	52331741	2	O–RING	
39	52331758	4	STUD	
47	52331766	1	FOAM	
48	52331774	1	FOAM	
49	52331774	1	FOAM	

NOTE: ALL OTHER REFERENCE NUMBERS SHOWN ON ASSEMBLY DRAWING ARE FOR REFERENCE ONLY.

52330941 CORNER GAUGE PANEL ASSEMBLY



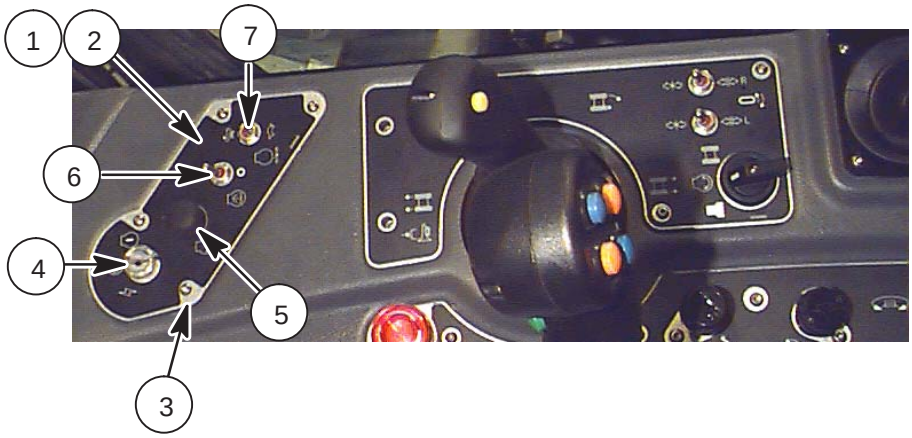
NOTE: REFERENCE NOS. 16, 17, 22 & 23 ARE NOT ILLUSTRATED.

52330941 CORNER GAUGE PANEL ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52330701	1	PANEL, LOWER GAUGE	
2	52330685	1	PANEL, UPPER GAUGE	
3	52330735	1	DECAL, LOWER GAUGE PANEL	
4	52330719	1	DECAL, UPPER GAUGE PANEL	
5	52325545	1	DECAL, DIAGNOSTIC PANEL	
6	95919130	12	CAPSCREW, BUTTON HD. HEX. SOCKET	
7	95992806	8	CAPSCREW, BUTTON HD. HEX. SOCKET	
8	51607448	1	GAUGE, FUEL LEVEL	
9	51618338	1	GAUGE, HYDRAULIC OIL TEMPERATURE	
10	51778884	1	GAUGE, AIR DISCHARGE TEMPERATURE	
11	51782415	2	GAUGE, PRESSURE (0–400 PSI)	
12	51618247	2	GAUGE, PRESSURE (0–5000 PSI)	
13	95264917	4	ADAPTER	
14	52325164	4	FITTING, PRESSURE TEST	
15	52325255	4	HOSE, PRESSURE TEST	
16	52322963	1	HARNESS, WIRING (GAUGE PANEL)	
17	52322971	1	HARNESS, WIRING (ENGINE EDM PANEL)	
18	57179608	1	SWITCH, TOGGLE (PANEL LIGHTS)	
19	57216913	1	SWITCH, TOGGLE (EMS SCROLL)	
20	51618437	6	LAMP, INDICATOR	
21	51716124	2	LAMP, GUAD GAUGE (CAT QUAD GAUGE)	
22	51791879	7	CONNECTOR, WIRE	
23	51795623	7	CONNECTOR, WIRE	
24	52326998	1	DECAL, ENGINE EMS PANEL	
26	52326568	REF	UNIT, ENGINE EMS MAIN (PART OF ENGINE, REFER TO PAGE 7.12–1)	
27	52326576	REF	UNIT, EMS GUAD GAUGE (PART OF ENGINE, REFER TO PAGE 7.12–1)	
28	52323045	1	HARNESS, QUAD GAUGE PANEL LIGHT WIRING	
29	57493868	1	CONTROLLER, ENGINE SPEED	
32	95365367	9	TERMINAL,RING	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

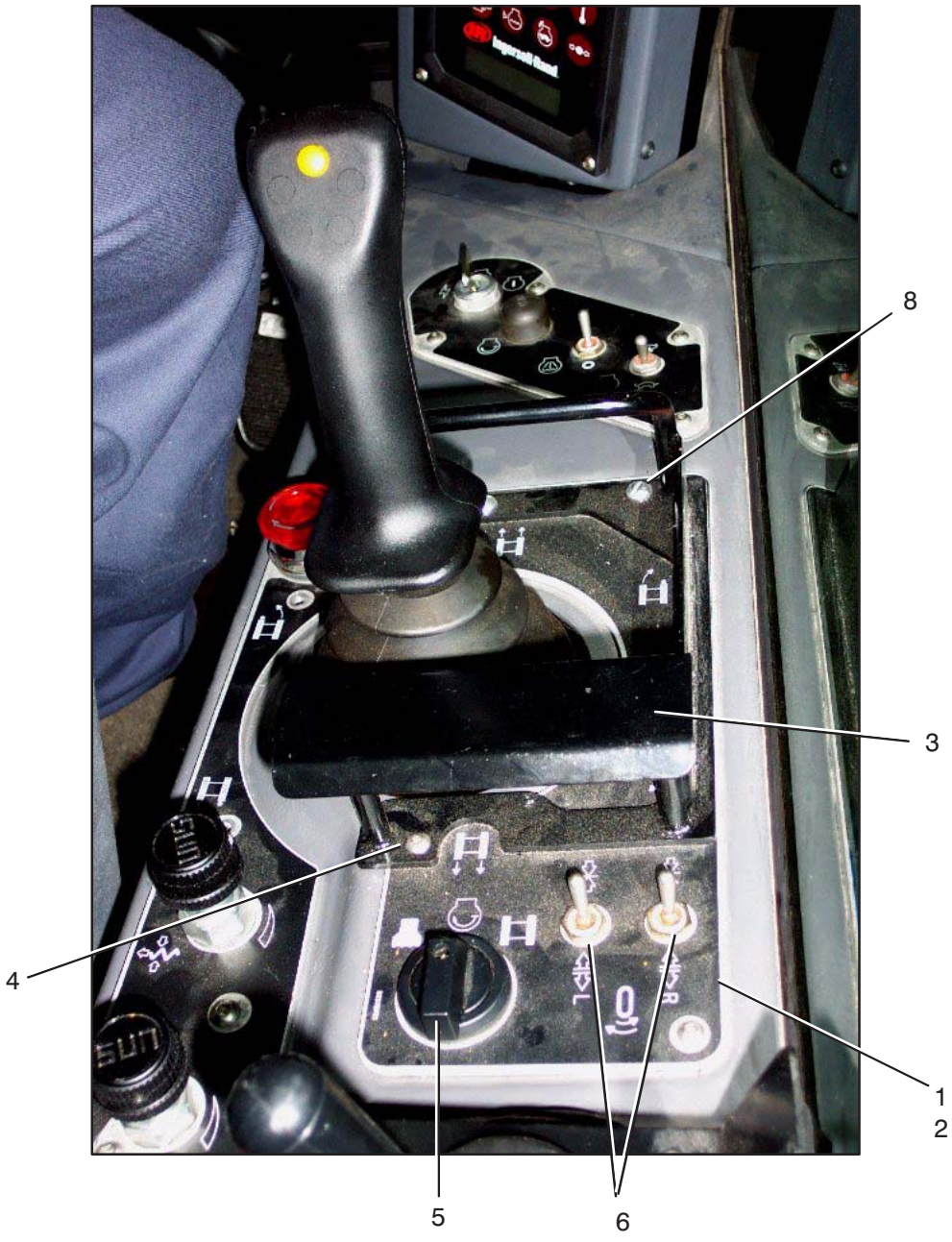
52325396 ENGINE IGNITION PANEL ASSEMBLY



NOTE: REF. NO. 8 IS NOT ILLUSTRATED.

REF. NO.	*PART NO.*	*QTY.*	*PART NAME* / *REMARKS*	*SERIAL NO.*
1	52316734	1	PANEL, ENGINE IGNITION	
2	52325560	1	DECAL, ENGINE IGNITION	
3	95919130	4	CAPSCREW, BUTTON HD. HEX. SOCKET	
4	51607299	1	SWITCH, ENGINE IGNITION	
5	51607315	1	SWITCH, ENGINE START	
6	57179608	1	SWITCH, ETHER INJECTION ON/OFF TOGGLE	
7	57179616	1	SWITCH, ENGINE SPEED TOGGLE	
8	52322914	1	HARNESS, ENGINE IGNITION PANEL WIRING	

52325420 DRILL/TRAM SELECTOR PANEL ASSEMBLY



7 NOT SHOWN

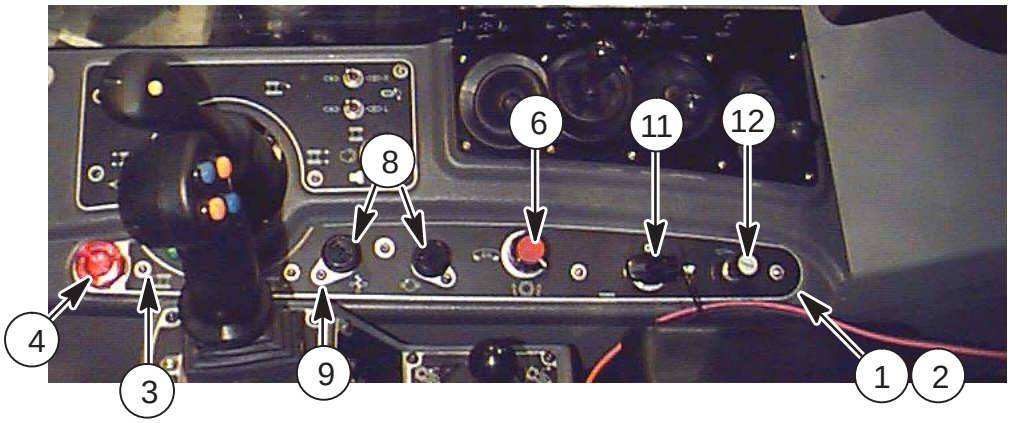
52325420 DRILL/TRAM SELECTOR PANEL ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52316742	1	PANEL, DRILL/TRAM JOYSTICK	
2	52326865	1	DECAL, DRILL/TRAM JOYSTICK	
3	52330677	1	HANDREST, TRAM CONTROL	
4	95919130	2	CAPSCREW, BUTTON HD.HEX. SOCKET	
5	52094232	1	SWITCH, DRILL/TRAM SELECTOR	
6	57179608	2	SWITCH, TRACK OSCILLATION LOCK TOGGLE	
7	52322922	1	HARNESS, DRILL/TRAM SELECTOR PANEL WIRING	
8	95917472	2	CAPSCREW	

NOTE: THIS PART IS FURNISHED WITH CAB.

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

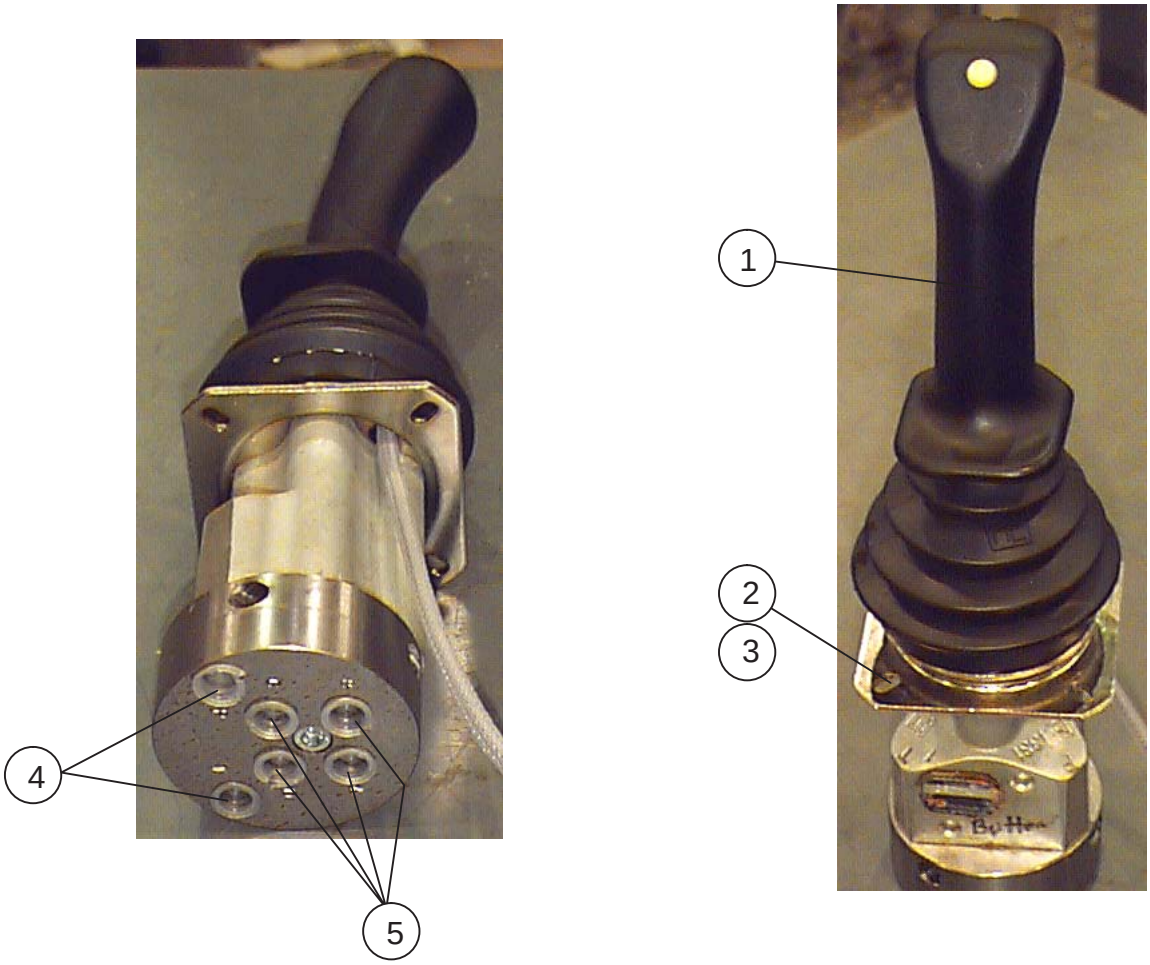
52330966 SIDE CONTROL PANEL ASSEMBLY



NOTE: REF. NOS. 5, 7, 10, 13, 14 & 15 ARE NOT ILLUSTRATED.

REF. NO.	*PART NO.*	*QTY.*	*PART NAME* / *REMARKS*	*SERIAL NO.*
1	52316692	1	PANEL, SIDE CONTROL	
2	52326840	1	DECAL, SIDE CONTROL	
3	95919130	4	CAPSCREW, BUTTON HD. HEX. SOCKET	
4	52325453	1	SWITCH, EMERGENCY STOP	
5	52322864	1	HARNESS, EMERGENCY STOP WIRING	
6	51780542	1	SWITCH, CAROUSEL ROTATION	
7	52322906	1	HARNESS, CAROUSEL ROTATION WIRING	
8	52321262	1	VALVE, FEED PRESSURE/ROTATION SPEED *REFER TO PAGE 9.43–1*	
9	96727987	3	CAPSCREW, BUTTON HD. HEX. SOCKET	
10	95365086	4	ADAPTER	
11	51608487	1	VALVE, VAPOSOL ON/OFF	
12	51992055	1	VALVE, VAPOSOL ADJUST	
13	52326857	1	ADAPTER (BETWEEN VAPOSOL VALVES)	
14	95209094	1	ADAPTER (WATER "IN" BALL VALVE)	
15	95286514	1	ADAPTER (WATER "OUT" NEEDLE VALVE)	

52314473 TRAM CONTROL JOYSTICK ASSEMBLY

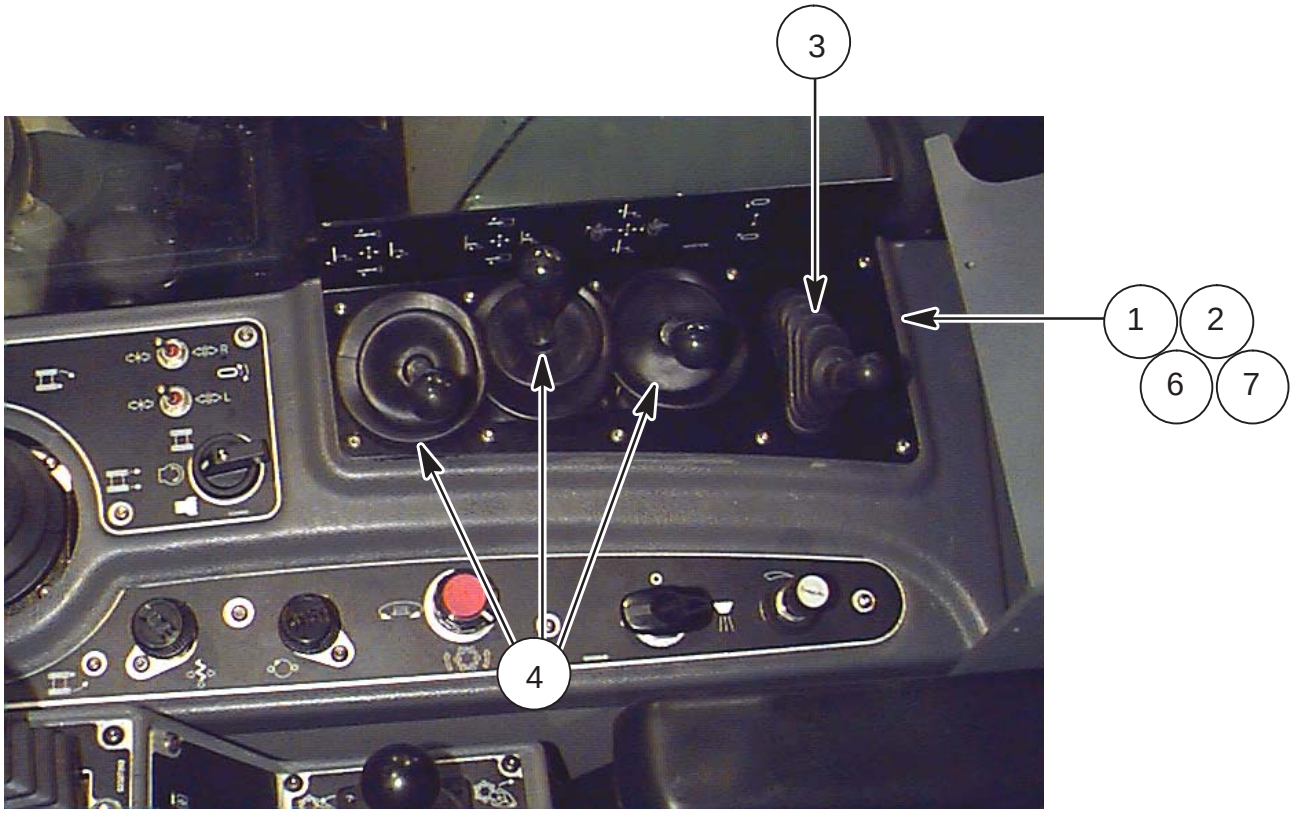


52314473 TRAM CONTROL JOYSTICK ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52311552	1	JOYSTICK, TRAM CONTROL *REFER TO PAGE 9.60–1*	
2	96727995	4	CAPSCREW, BUTTON HD. HEX. SOC.	
3	96726781	4	LOCKNUT, FLANGED HD.	
4	95365078	2	ADAPTER	
5	95371258	4	ADAPTER	
6	96701289	4	WASHER	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

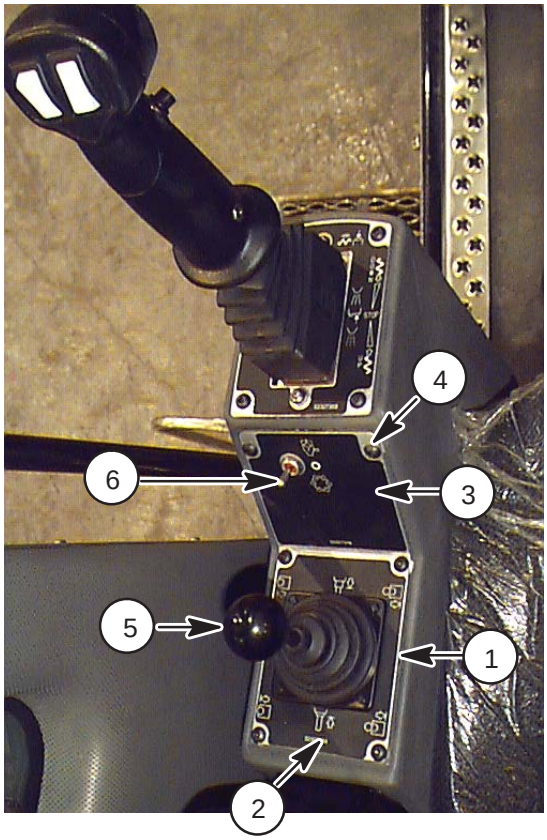
52330958 POSITIONING CONTROL VALVE PANEL ASSEMBLY



52330958 POSITIONING CONTROL VALVE PANEL ASSEMBLY

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52316726	1	PANEL, POSITIONING CONTROL VALVE	
2	52327426	1	DECAL, POSITIONING CONTROL VALVE	
3	51313146	1	BOOT, LEVER	
4	52326972	3	BELLOWS	
6	52326949	1	PLATE, RETAINER	
7	95992806	10	CAPSCREW, BUTTON HD. HEX. SOC.	

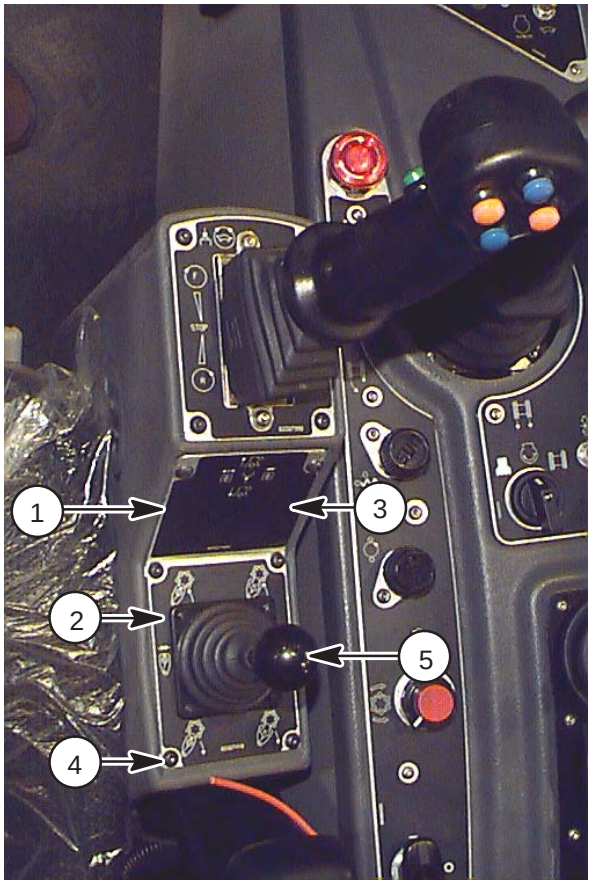
52330925 LEFT REAR SEAT POD PANEL ASSEMBLY



NOTE: REF. NO. 7 IS NOT ILLUSTRATED.

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	52316775	1	PANEL, LEFT REAR SEAT POD	
2	52327384	1	DECAL, ROD LOCK & BREAKOUT FORK	
3	52327376	1	DECAL, DUST COLLECTOR & ARC	
4	95917456	6	CAPSCREW, BUTTON HD. HEX. SOCKET	
5	52330982	1	JOYSTICK, ROD LOCK & BREAKOUT FORK *REFER TO PAGE 9.54–1*	
6	57698920	1	SWITCH, TOGGLE	
7	52322997	1	HARNESS, LEFT REAR SEAT POD WIRING	

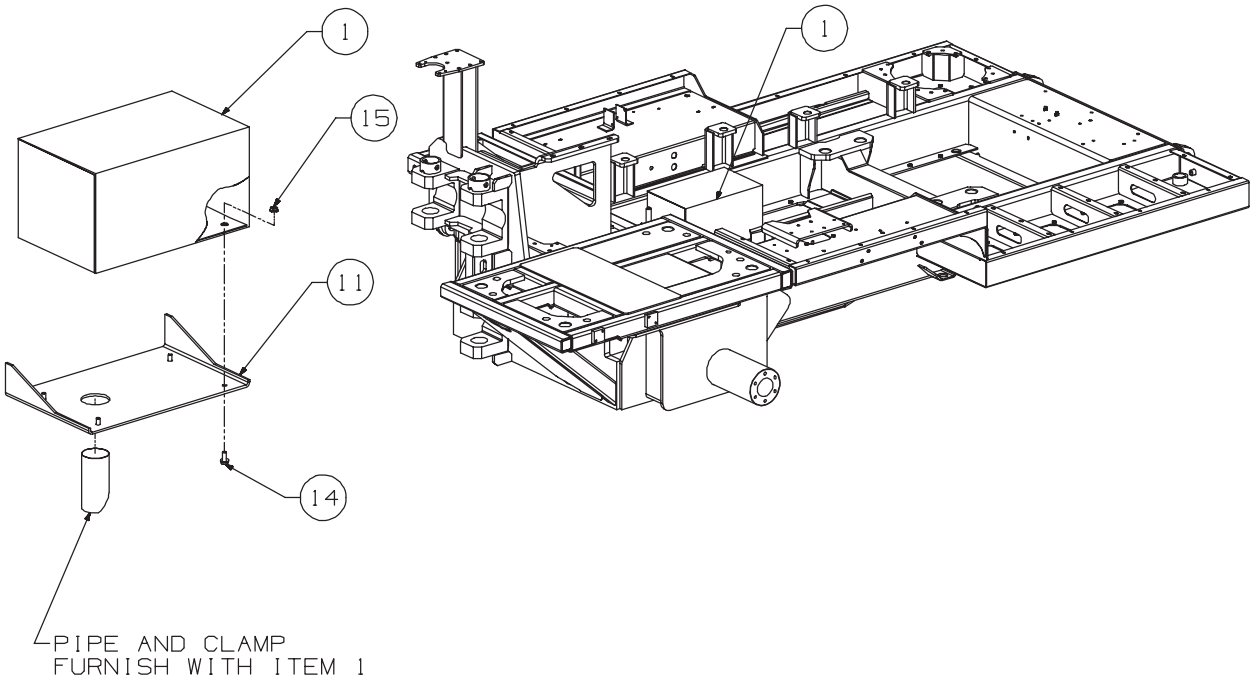
52330933 RIGHT REAR SEAT POD PANEL ASSEMBLY

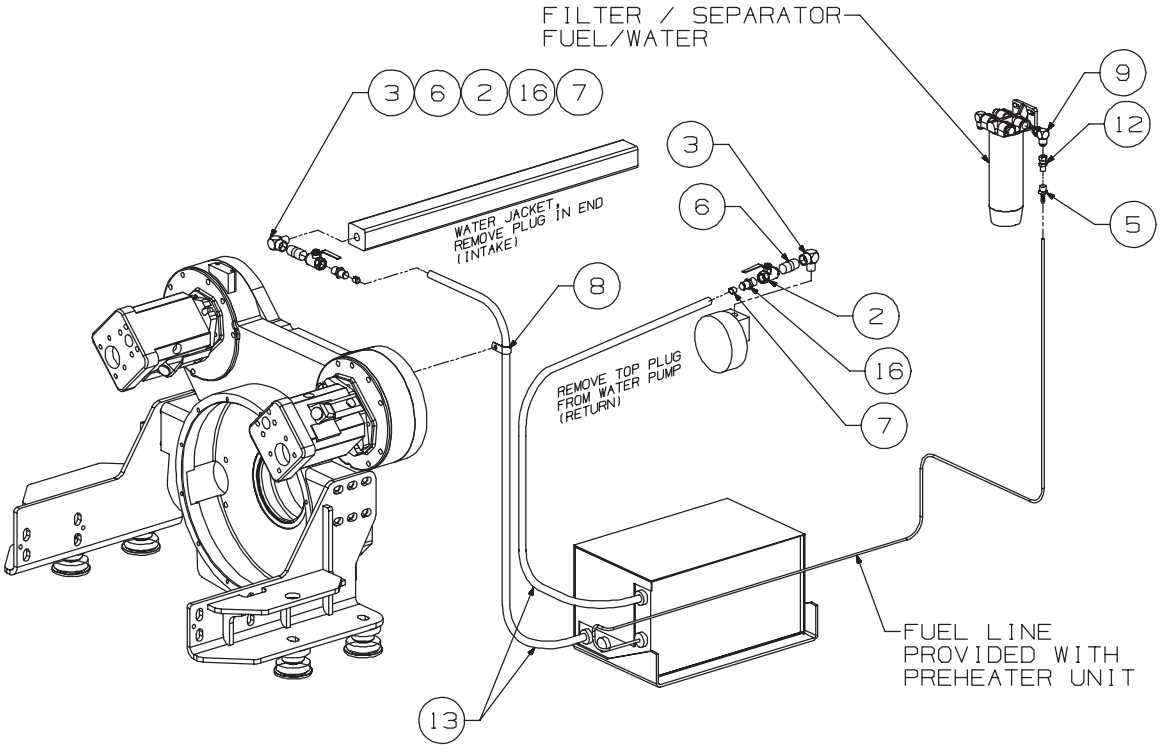


NOTE: REF. NO. 7 IS NOT ILLUSTRATED.

REF. NO.	*PART NO.*	*QTY.*	*PART NAME* / *REMARKS*	*SERIAL NO.*
1	52319191	1	PANEL, RIGHT REAR SEAT POD	
2	52327418	1	DECAL, ROD CHANGER	
3	52327400	1	DECAL, DUSTHOOD/ CENTRALIZER	
4	95917456	6	CAPSCREW, BUTTON HD. HEX. SOCKET	
5	52315884	1	JOYSTICK, ROD CHANGER CONTROL	
7	52322989	1	HARNESS, RIGHT REAR SEAT POD WIRING	

57737611 PREHEATER





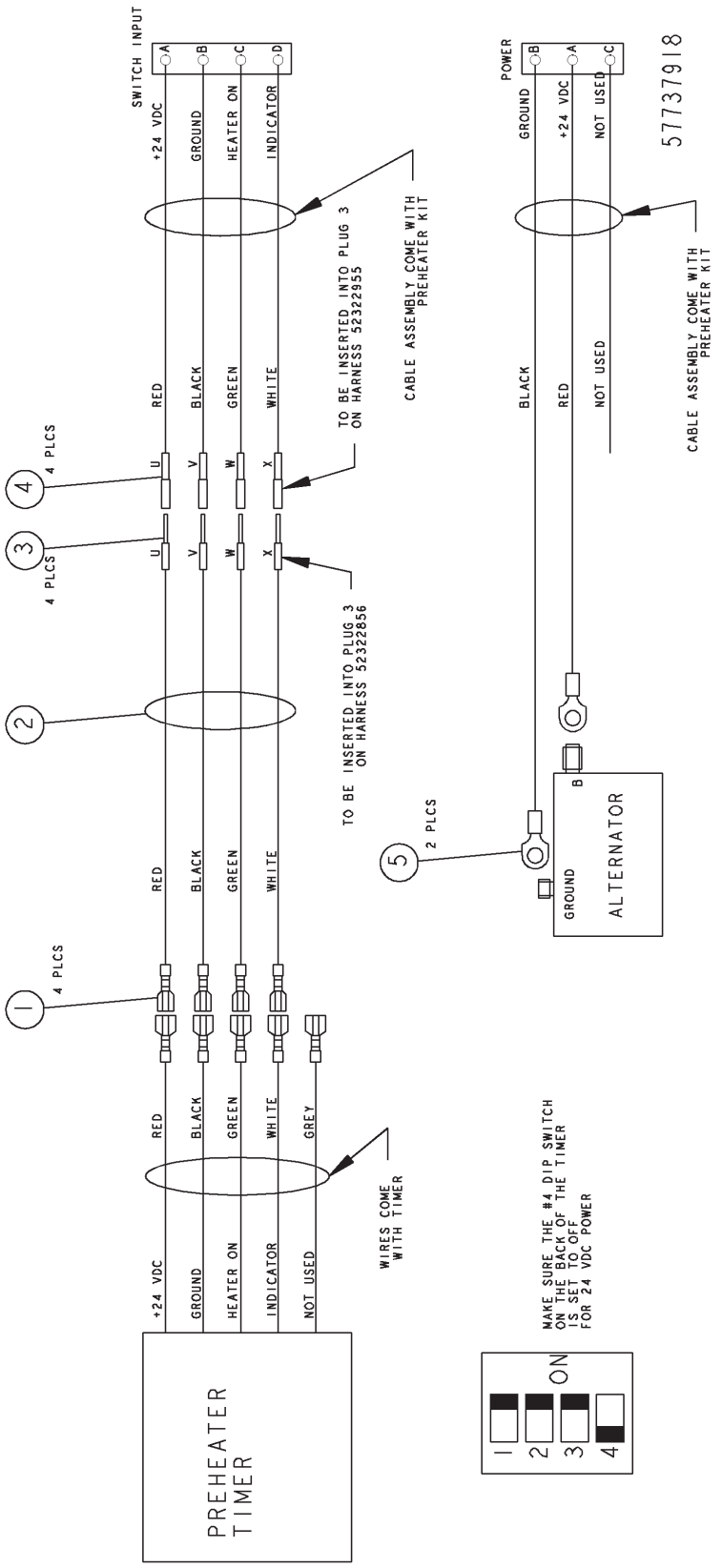
57737611 PREHEATER

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57643827	1	HEATER,DIESEL FIRED	
2	50829605	2	VALVE,BALL–1/2	
3	95264891	2	ELBOW, 90DEG	
5	51730265	1	FITTING	
6	95315214	2	NIPPLE,NPTF DRYSEAL	
7	95220844	8	CLAMP, HOSE	
8	95457586	1	CLAMP, HOSE	
9	95356853	1	ELBOW,90 DEG	
10	57655722	1	TIMER,7 DAY DIGITAL	
11	52330370	1	PLATE,MOUNTING–PREHEATER	
12	51304434	1	ADAPTER	
13	57065260	1	HOSE,HYD	
14	96727797	4	BOLT	
15	96726799	4	NUT	
16	57737652	2	CONNECTOR, HOSE	
17	57737918	1	PREHEATER WIRING	

REFER TO PAGE 13.18–1

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57737918 PREHEATER WIRING



57737918 PREHEATER WIRING

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	58150228	4	TERMINAL, FEMALE PUSHON	
2	57473563	6	CABLE,18/6 CONDUCTOR	
3	59436840	4	PIN	
4	54530993	4	SOCKET	
5	95373841	2	TERMINAL	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

52327079 ANGLE INDICATOR PARTS GROUP, 2D

LIST ONLY
NO DRAWING AVAILABLE

REF. NO.	*PART NO.*	*QTY.*	*PART NAME* / *REMARKS*	*SERIAL NO.*
1	52327061	1	KIT, ANGLE INDICATOR (2D) *REFER TO PAGE 14.1–1*	
2	52323060	1	HARNESS, ANGLE INDICATOR WIRING	
3	52327343	1	DECAL, I-R ANGLE INDICATOR	

52327061 ANGLE INDICATOR KIT (2D)

LIST ONLY
NO DRAWING AVAILABLE

REF. NO.	*PART NO.*	*QTY.*	*PART NAME* / *REMARKS*	*SERIAL NO.*
1	52327285	1	UNIT, DISPLAY	
2	52327293	1	UNIT, INCLINOCAN BUS (WITH PLUGS)	
3	52327491	1	PLATE, MOUNTING	

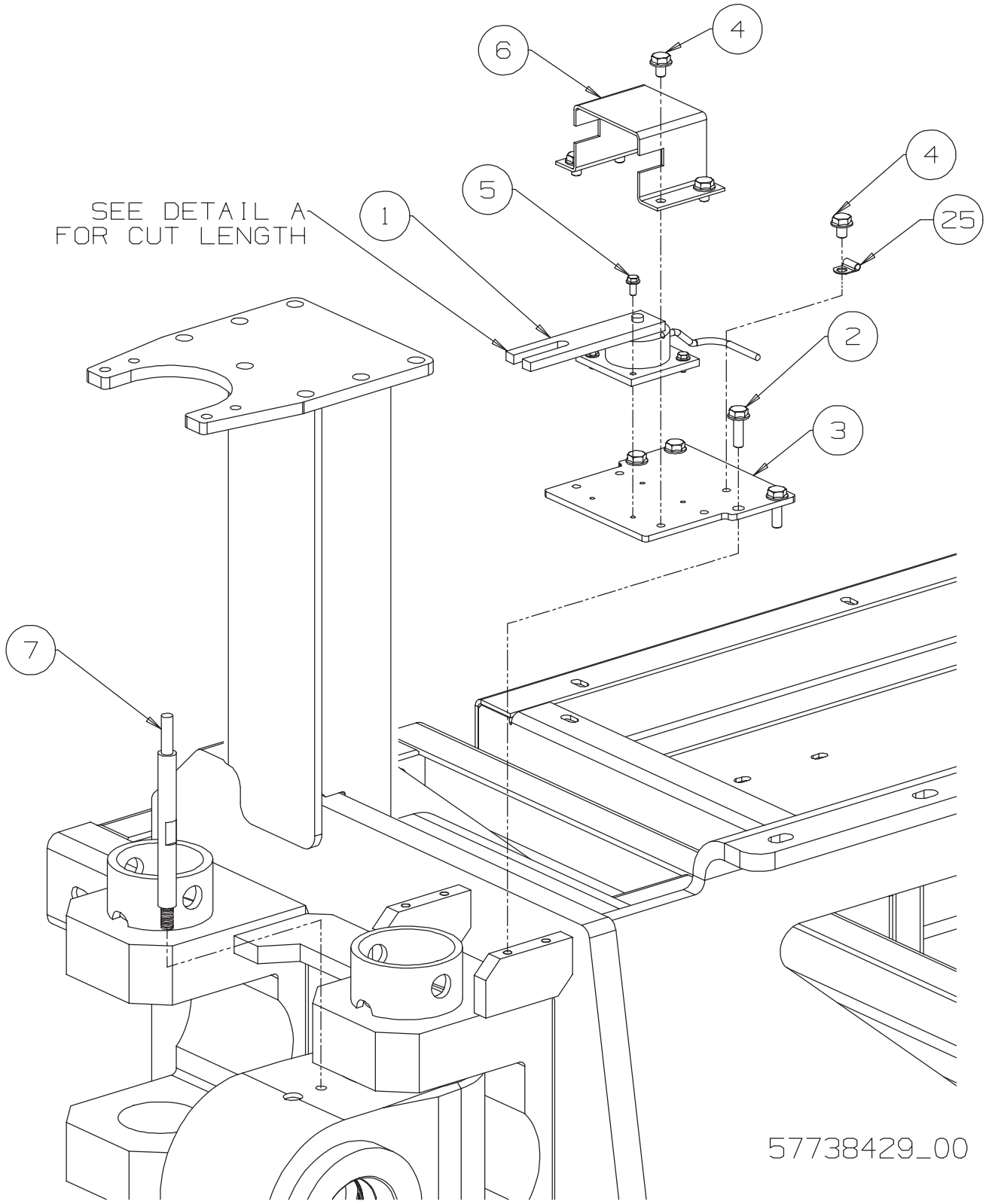
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57699217 INDICATOR, ANGLE INSTL

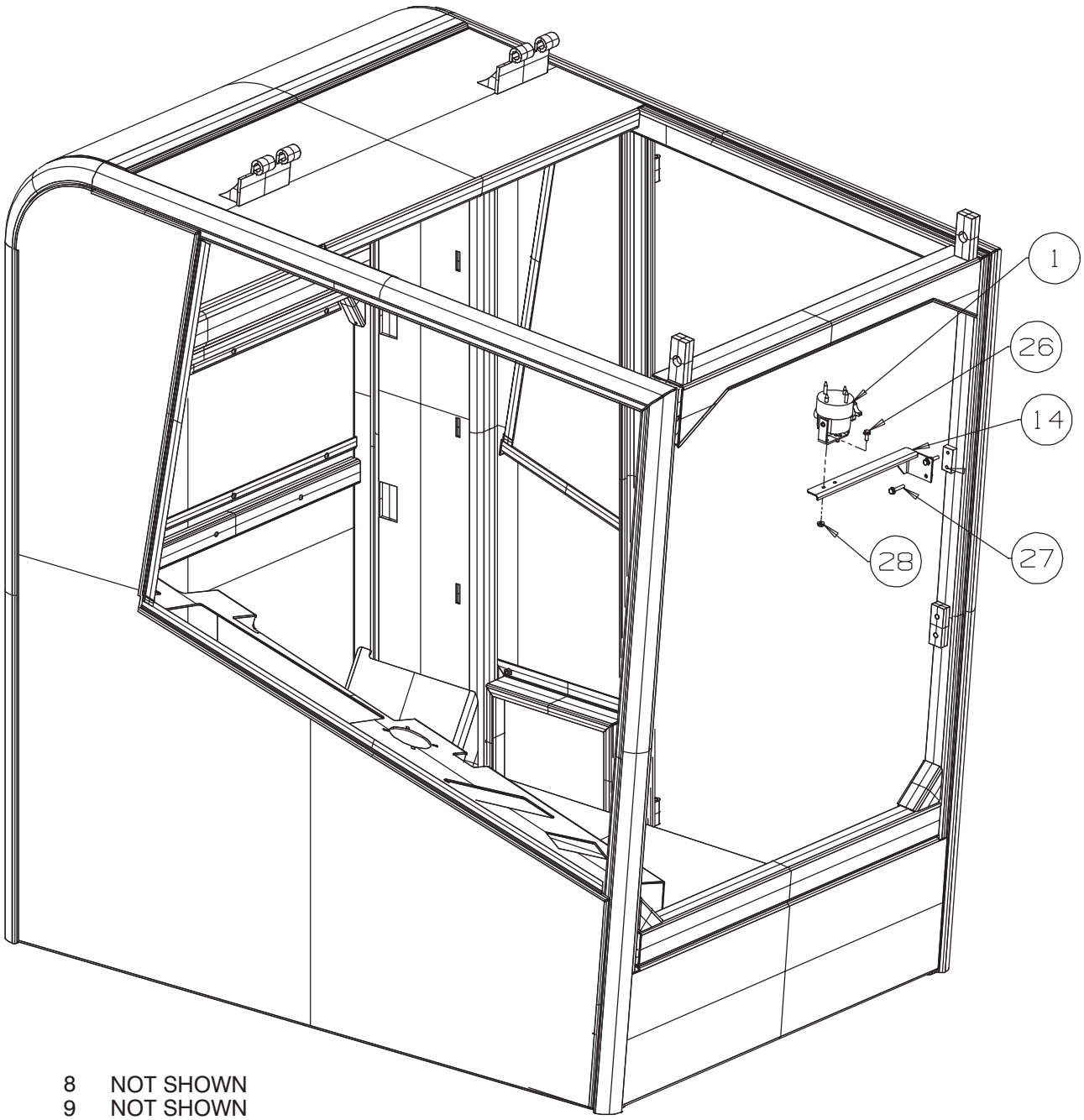
LIST ONLY
NO DRAWING AVAILABLE

REF. NO.	*PART NO.*	*QTY.*	*PART NAME* / *REMARKS*	*SERIAL NO.*
70	57673451	1	HARNESS, LIM SENSOR	
87	52327061	1	KIT, ANGLE INDIACATOR (2D)	
88	52327343	1	DECAL, I-R ANGLE INDICATOR	

57738429 POSITIONING, 3D, CM700D



57738429 POSITIONING, 3D, CM700D



8	NOT SHOWN
9	NOT SHOWN
10	NOT SHOWN
11	NOT SHOWN
14	NOT SHOWN
22	NOT SHOWN
23	NOT SHOWN
26	NOT SHOWN
29	NOT SHOWN

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57738429 POSITIONING, 3D, CM700D

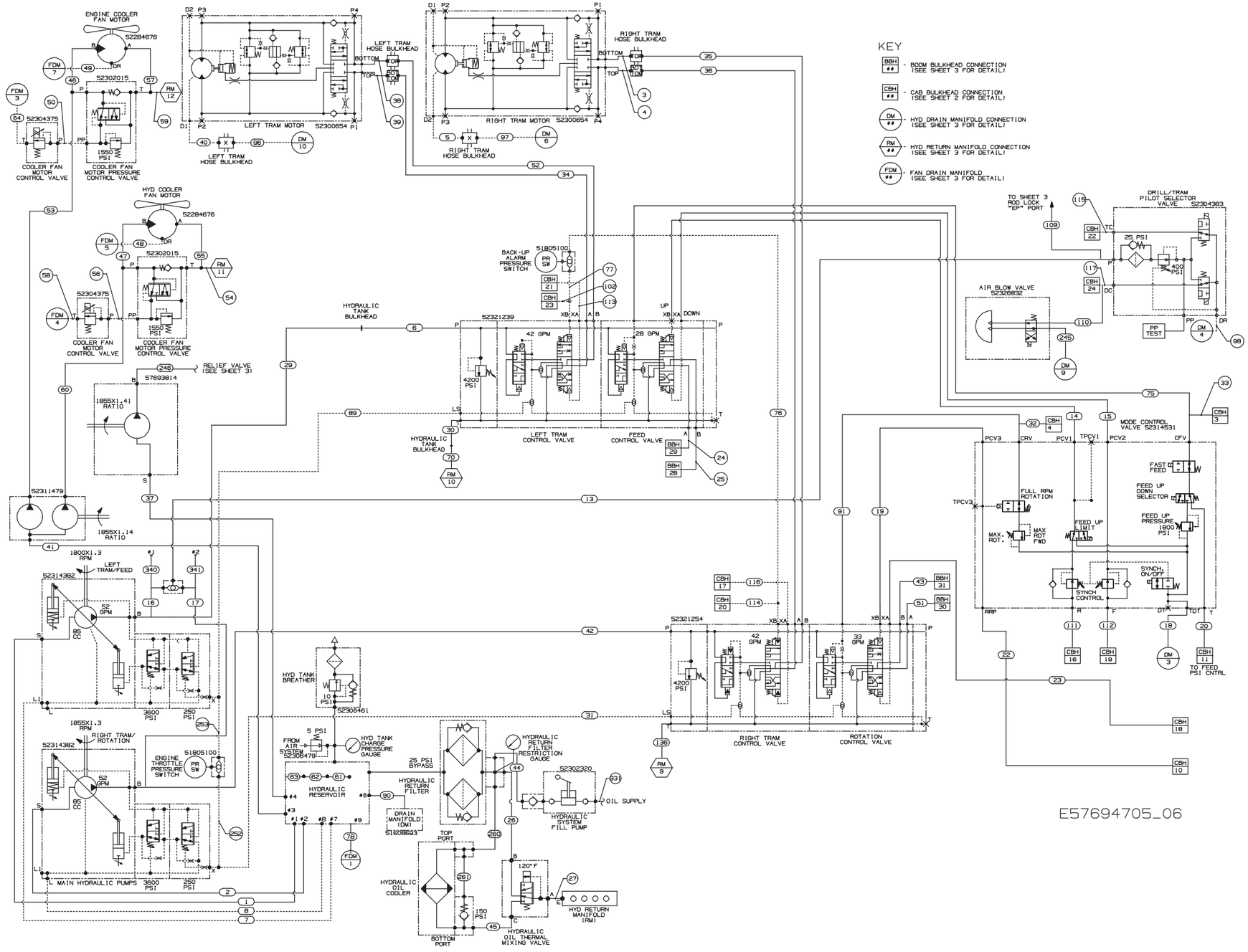
REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57738387	1	POSITIONING 3D W/O SPEED	
2	92329309	4	SCREW–HEX	
3	57717241	1	BRACKET, FRAME	
4	96728241	7	CAPSCREW	
6	57721920	1	GUARD, 3D POSITION	
7	57718942	1	PIN, 3D POSITION	
8	57737819	1	HARNESS, BULKHEAD	
9	57737801	1	HARNESS, PATCHUP	
10	57737827	1	HARNESS – COMPENSATOR	
11	57738437	1	HARNESS, WIRE	
14	57721912	1	BRACKET, AIMER	
22	57728800	1	DECAL	
23	57728818	0	SCHEMATIC, 3D POSITON	
25	95396768	8	CLAMP, HOSE	
26	96742689	2	BOLT, HEX FLANGE	
27	95920377	2	CAPSCREW	
28	96704176	2	NUT, FLANGED	
29	57673451	1	HARNESS, LIM SENSOR	

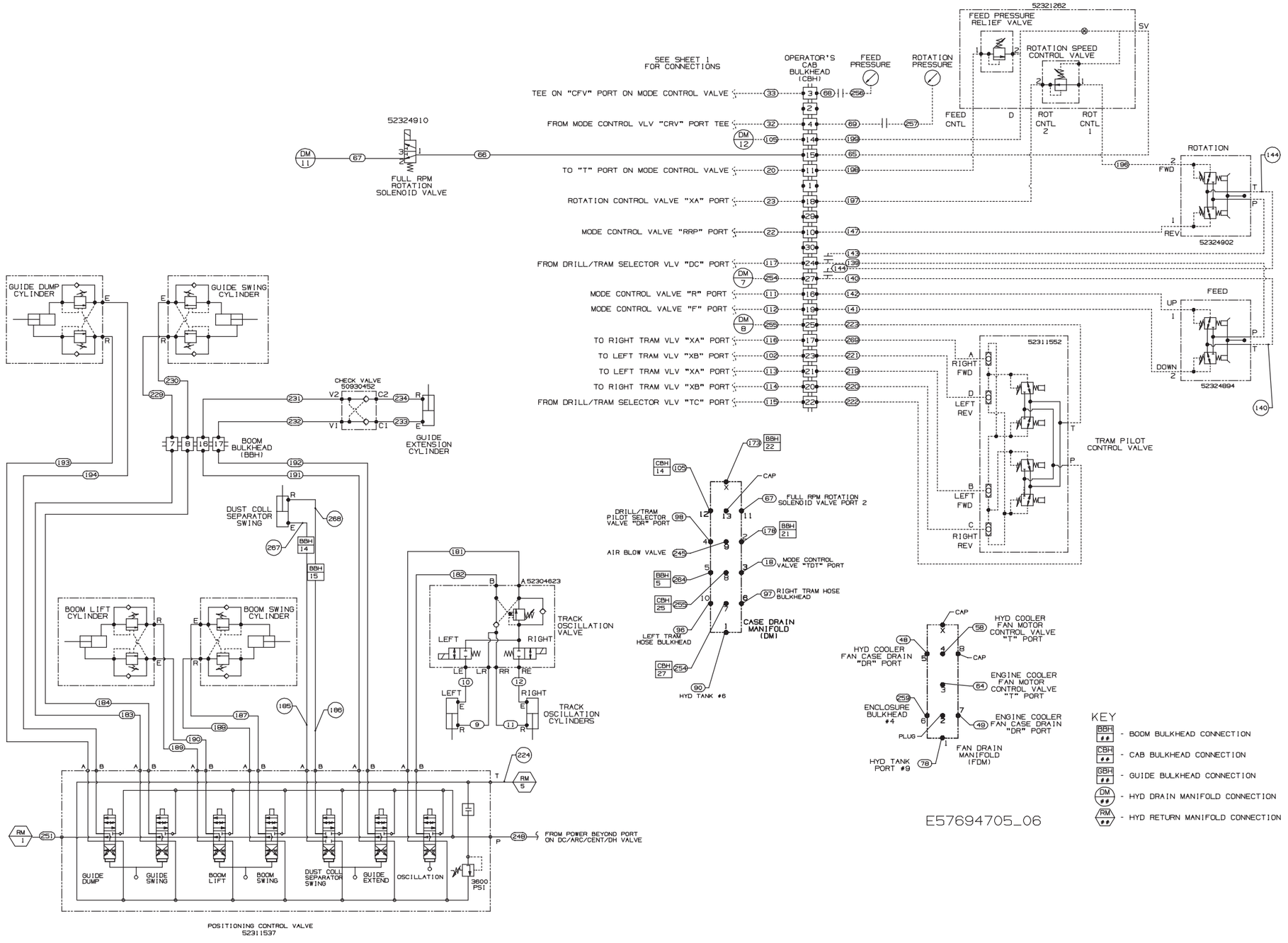
NO DRAWING IS AVAILABLE AT THIS TIME

57708190 FLUIDS

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	54418850	24	GALLONS FLUID, COMP. XHP505	
2	51352201	210	GALLONS OIL, HYRAULIC	
3	50862705	6	QUARTS GEAR OIL	
4	50257112	2	GALLONS ROCK DRILL OIL	
5	50651918	5	POUNDS GREASE	
6	50946797	28	QUARTS ENG MTR OIL	
7	50651900	40	GALLONS FUEL OIL	
8	50262526	10	GALLONS ANTI–FREEZE	
9	51309243	8	GALLONS PAINT, BEIGE	
10	51309250	2	GALLONS PAINT, BLACK	
11	52307410	1	KIT, HOSE BUNDLING	
12	57677254	2	FILTER ELEMENT, HIGH PRESSURE	

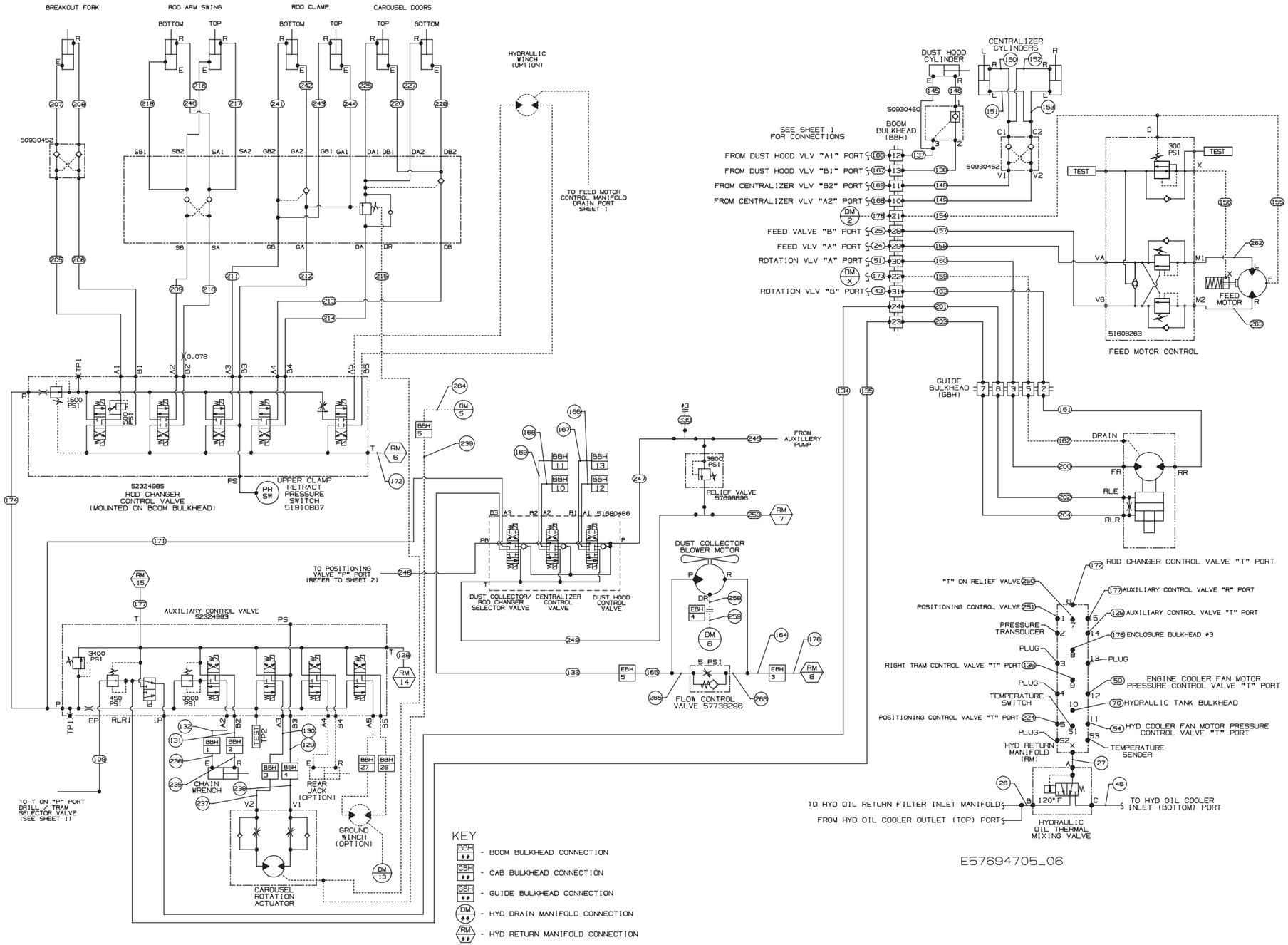
57694705 HYDRAULIC SCHEMATIC





WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model ECM780.

57694705 HYDRAULIC SCHEMATIC



57694705 HYDRAULIC SCHEMATIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
1	57728693	1	ASSEMBLY, HOSE	
2	57694739	1	ASSEMBLY, HOSE	
3	57347494	1	ASSEMBLY, HOSE	
4	56954001	1	ASSEMBLY, HOSE	
5	56955610	1	ASSEMBLY, HOSE	
6	57698870	1	ASSEMBLY, HOSE	
7	57728669	1	ASSEMBLY, HOSE	
8	57714651	1	ASSEMBLY, HOSE	
9	56971955	1	ASSEMBLY, HOSE	
10	56971955	1	ASSEMBLY, HOSE	
11	52317658	1	ASSEMBLY, HOSE	
12	56966278	1	ASSEMBLY, HOSE	
13	56953896	1	ASSEMBLY, HOSE	
14	52226479	1	ASSEMBLY, HOSE	
15	57004020	1	ASSEMBLY, HOSE	
16	56953870	1	ASSEMBLY, HOSE	
17	56961840	1	ASSEMBLY, HOSE	
18	58207325	1	ASSEMBLY, HOSE	
19	56964125	1	ASSEMBLY, HOSE	
20	56964273	1	ASSEMBLY, HOSE	
22	56972680	1	ASSEMBLY, HOSE	
23	57506370	1	ASSEMBLY, HOSE	
24	57696254	1	ASSEMBLY, HOSE	
25	57403958	1	ASSEMBLY, HOSE	
26	57728859	1	ASSEMBLY, HOSE	
27	57728701	1	ASSEMBLY, HOSE	
29	57728685	1	ASSEMBLY, HOSE	
30	57694952	1	ASSEMBLY, HOSE	
31	57116899	1	ASSEMBLY, HOSE	
32	51867224	1	ASSEMBLY, HOSE	
33	57020802	1	ASSEMBLY, HOSE	
34	57002248	1	ASSEMBLY, HOSE	
35	57525347	1	ASSEMBLY, HOSE	
36	57525347	1	ASSEMBLY, HOSE	
37	52317831	1	ASSEMBLY, HOSE	
38	52317617	1	ASSEMBLY, HOSE	
39	56954001	1	ASSEMBLY, HOSE	

57694705 HYDRAULIC SCHEMATIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
40	56955610	1	ASSEMBLY, HOSE	
41	52317864	1	ASSEMBLY, HOSE	
42	57728677	1	ASSEMBLY, HOSE	
43	57696270	1	ASSEMBLY, HOSE	
44	57714669	1	ASSEMBLY, HOSE	
45	57728867	1	ASSEMBLY, HOSE	
46	56956923	1	ASSEMBLY, HOSE	
47	52318086	1	ASSEMBLY, HOSE	
48	57006520	1	ASSEMBLY, HOSE	
49	57498230	1	ASSEMBLY, HOSE	
50	51028371	1	ASSEMBLY, HOSE	
51	57136780	1	ASSEMBLY, HOSE	
52	57534406	1	ASSEMBLY, HOSE	
53	52318052	1	ASSEMBLY, HOSE	
54	56953920	1	ASSEMBLY, HOSE	
55	56972797	1	ASSEMBLY, HOSE	
56	57015505	1	ASSEMBLY, HOSE	
57	56954381	1	ASSEMBLY, HOSE	
58	57102139	1	ASSEMBLY, HOSE	
59	52318110	1	ASSEMBLY, HOSE	
60	52318128	1	ASSEMBLY, HOSE	
61	57496135	1	ASSEMBLY, HOSE	
62	56957772	1	ASSEMBLY, HOSE	
63	57599060	1	ASSEMBLY, HOSE	
64	57041550	1	ASSEMBLY, HOSE	
65	56964208	1	ASSEMBLY, HOSE	
66	58144585	1	ASSEMBLY, HOSE	
67	56972680	1	ASSEMBLY, HOSE	
68	52325255	1	ASSEMBLY, HOSE	
69	52325255	1	ASSEMBLY, HOSE	
70	57703878	1	ASSEMBLY, HOSE	
75	57004020	1	ASSEMBLY, HOSE	
76	52317823	1	ASSEMBLY, HOSE	
77	57695959	1	ASSEMBLY, HOSE	
78	56992084	1	ASSEMBLY, HOSE	
89	58207325	1	ASSEMBLY, HOSE	
90	57397960	1	ASSEMBLY, HOSE	
91	56964133	1	ASSEMBLY, HOSE	
96	57703886	1	ASSEMBLY, HOSE	
97	57696197	1	ASSEMBLY, HOSE	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

57694705 HYDRAULIC SCHEMATIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
98	56961774	1	ASSEMBLY, HOSE	
102	56966211	1	ASSEMBLY, HOSE	
105	56964232	1	ASSEMBLY, HOSE	
109	58182791	1	ASSEMBLY, HOSE	
110	57209355	1	ASSEMBLY, HOSE	
111	56972680	1	ASSEMBLY, HOSE	
112	56972680	1	ASSEMBLY, HOSE	
113	56974579	1	ASSEMBLY, HOSE	
114	56966211	1	ASSEMBLY, HOSE	
115	56954076	1	ASSEMBLY, HOSE	
116	57506370	1	ASSEMBLY, HOSE	
117	56954076	1	ASSEMBLY, HOSE	
128	56994577	1	ASSEMBLY, HOSE	
129	57496309	1	ASSEMBLY, HOSE	
130	57496309	1	ASSEMBLY, HOSE	
131	57004673	1	ASSEMBLY, HOSE	
132	57004673	1	ASSEMBLY, HOSE	
133	57696205	1	ASSEMBLY, HOSE	
134	56958705	1	ASSEMBLY, HOSE	
135	56958705	1	ASSEMBLY, HOSE	
136	57694978	1	ASSEMBLY, HOSE	
137	51867919	1	ASSEMBLY, HOSE	
138	51867919	1	ASSEMBLY, HOSE	
139	57005654	1	ASSEMBLY, HOSE	
140	57005654	1	ASSEMBLY, HOSE	
141	52319795	1	ASSEMBLY, HOSE	
142	52319795	1	ASSEMBLY, HOSE	
143	57392920	1	ASSEMBLY, HOSE	
144	57392920	1	ASSEMBLY, HOSE	
145	51063378	1	ASSEMBLY, HOSE	
146	51030815	1	ASSEMBLY, HOSE	
147	58146622	1	ASSEMBLY, HOSE	
148	51780898	1	ASSEMBLY, HOSE	
149	51780898	1	ASSEMBLY, HOSE	
150	51043750	1	ASSEMBLY, HOSE	
151	51043750	1	ASSEMBLY, HOSE	
152	51059723	1	ASSEMBLY, HOSE	
153	51059723	1	ASSEMBLY, HOSE	
154	51867570	1	ASSEMBLY, HOSE	

57694705 HYDRAULIC SCHEMATIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
155	51028579	1	ASSEMBLY, HOSE	
156	51028579	1	ASSEMBLY, HOSE	
157	51909497	1	ASSEMBLY, HOSE	
158	51910628	1	ASSEMBLY, HOSE	
159	51214864	1	ASSEMBLY, HOSE	
160	51910586	1	ASSEMBLY, HOSE	
161	57737066	1	ASSEMBLY, HOSE	
162	51994895	1	ASSEMBLY, HOSE	
163	51910586	1	ASSEMBLY, HOSE	
164	57010126	1	ASSEMBLY, HOSE	
165	57010126	1	ASSEMBLY, HOSE	
166	57116881	1	ASSEMBLY, HOSE	
167	57116881	1	ASSEMBLY, HOSE	
168	57116881	1	ASSEMBLY, HOSE	
169	57116881	1	ASSEMBLY, HOSE	
171	57438681	1	ASSEMBLY, HOSE	
172	57040818	1	ASSEMBLY, HOSE	
173	57428336	1	ASSEMBLY, HOSE	
174	56953607	1	ASSEMBLY, HOSE	
176	56962236	1	ASSEMBLY, HOSE	
177	52255098	1	ASSEMBLY, HOSE	
178	57038424	1	ASSEMBLY, HOSE	
179	56964331	1	ASSEMBLY, HOSE	
181	57696130	1	ASSEMBLY, HOSE	
182	57112526	1	ASSEMBLY, HOSE	
183	57696148	1	ASSEMBLY, HOSE	
184	51910669	1	ASSEMBLY, HOSE	
185	57696155	1	ASSEMBLY, HOSE	
186	51910669	1	ASSEMBLY, HOSE	
187	52238474	1	ASSEMBLY, HOSE	
188	57696163	1	ASSEMBLY, HOSE	
189	52325586	1	ASSEMBLY, HOSE	
190	58207333	1	ASSEMBLY, HOSE	
191	57696148	1	ASSEMBLY, HOSE	
192	51910669	1	ASSEMBLY, HOSE	
193	58087032	1	ASSEMBLY, HOSE	
194	52319720	1	ASSEMBLY, HOSE	
196	56966302	1	ASSEMBLY, HOSE	
197	56964208	1	ASSEMBLY, HOSE	
198	56964208	1	ASSEMBLY, HOSE	

WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

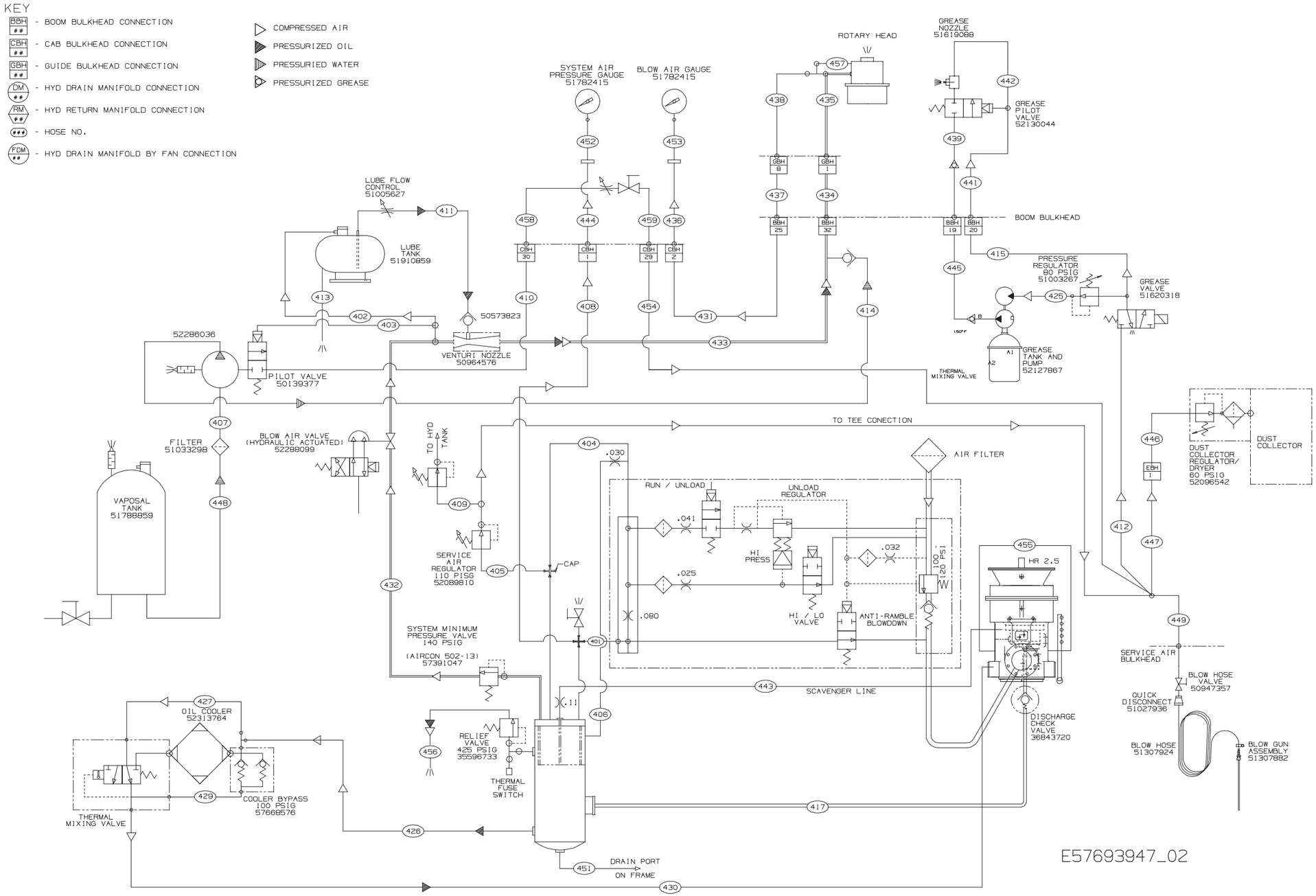
57694705 HYDRAULIC SCHEMATIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
199	56964208	1	ASSEMBLY, HOSE	
200	57737058	1	ASSEMBLY, HOSE	
201	51910594	1	ASSEMBLY, HOSE	
202	51994903	1	ASSEMBLY, HOSE	
203	51910594	1	ASSEMBLY, HOSE	
204	51994903	1	ASSEMBLY, HOSE	
205	51780898	1	ASSEMBLY, HOSE	
206	51780898	1	ASSEMBLY, HOSE	
207	51059772	1	ASSEMBLY, HOSE	
208	51059772	1	ASSEMBLY, HOSE	
209	51994903	1	ASSEMBLY, HOSE	
210	51994903	1	ASSEMBLY, HOSE	
211	51994903	1	ASSEMBLY, HOSE	
212	51994903	1	ASSEMBLY, HOSE	
213	51994903	1	ASSEMBLY, HOSE	
214	51994903	1	ASSEMBLY, HOSE	
215	51867158	1	ASSEMBLY, HOSE	
216	51916047	1	ASSEMBLY, HOSE	
217	51916047	1	ASSEMBLY, HOSE	
218	51030799	1	ASSEMBLY, HOSE	
219	52226453	1	ASSEMBLY, HOSE	
220	56964208	1	ASSEMBLY, HOSE	
221	56964208	1	ASSEMBLY, HOSE	
222	56954043	1	ASSEMBLY, HOSE	
223	56954043	1	ASSEMBLY, HOSE	
224	52118882	1	ASSEMBLY, HOSE	
225	51916062	1	ASSEMBLY, HOSE	
226	51916062	1	ASSEMBLY, HOSE	
227	51041085	1	ASSEMBLY, HOSE	
228	51041085	1	ASSEMBLY, HOSE	
229	50979350	1	ASSEMBLY, HOSE	
230	50979350	1	ASSEMBLY, HOSE	
231	51867547	1	ASSEMBLY, HOSE	
232	51867521	1	ASSEMBLY, HOSE	
233	51300390	1	ASSEMBLY, HOSE	
234	51300564	1	ASSEMBLY, HOSE	
235	51994853	1	ASSEMBLY, HOSE	
236	51994853	1	ASSEMBLY, HOSE	
237	51867919	1	ASSEMBLY, HOSE	
238	51867919	1	ASSEMBLY, HOSE	

57694705 HYDRAULIC SCHEMATIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
239	51867919	1	ASSEMBLY, HOSE	
240	51030815	1	ASSEMBLY, HOSE	
241	51060143	1	ASSEMBLY, HOSE	
242	51060143	1	ASSEMBLY, HOSE	
243	51916054	1	ASSEMBLY, HOSE	
244	51916054	1	ASSEMBLY, HOSE	
245	56966187	1	ASSEMBLY, HOSE	
246	56956923	1	ASSEMBLY, HOSE	
247	57690570	1	ASSEMBLY, HOSE	
248	57690588	1	ASSEMBLY, HOSE	
249	57690596	1	ASSEMBLY, HOSE	
250	57007486	1	ASSEMBLY, HOSE	
251	56992084	1	ASSEMBLY, HOSE	
252	56958259	1	ASSEMBLY, HOSE	
253	56971955	1	ASSEMBLY, HOSE	
254	56949399	1	ASSEMBLY, HOSE	
255	56954050	1	ASSEMBLY, HOSE	
256	52325255	1	ASSEMBLY, HOSE	
257	52325255	1	ASSEMBLY, HOSE	
258	56968365	1	ASSEMBLY, HOSE	
259	52319605	1	ASSEMBLY, HOSE	
260	57729071	1	ASSEMBLY, HOSE	
261	57704777	1	ASSEMBLY, HOSE	
262	51910636	1	ASSEMBLY, HOSE	
263	51910636	1	ASSEMBLY, HOSE	
264	51868057	1	ASSEMBLY, HOSE	
265	57739732	1	ASSEMBLY, HOSE	
266	57739732	1	ASSEMBLY, HOSE	
267	52115771	1	ASSEMBLY, HOSE	
268	52115771	1	ASSEMBLY, HOSE	
269	56964208	1	ASSEMBLY, HOSE	
331	50978543	1	ASSEMBLY, HOSE	
339	51867158	1	ASSEMBLY, HOSE	
340	52225950	1	ASSEMBLY, HOSE	
341	52197647	1	ASSEMBLY, HOSE	

57693947 AIR/OIL/WATER SCHEMATIC



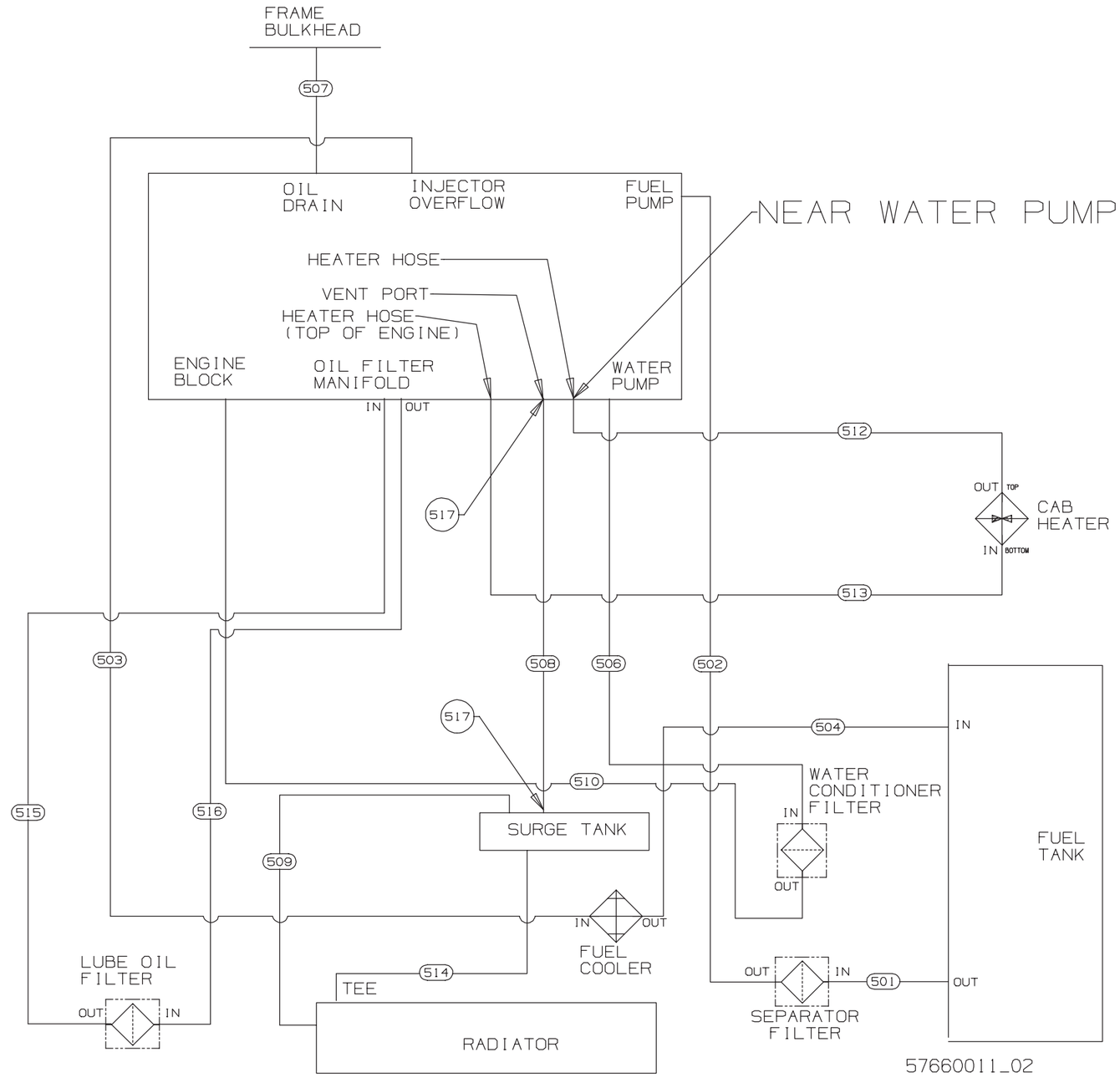
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model ECM720.

57693947 AIR/OIL/WATER SCHEMATIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
401	57730459	1	ASSEMBLY, HOSE	
402	56948763	1	ASSEMBLY, HOSE	
403	56958374	1	ASSEMBLY, HOSE	
404	57730467	1	ASSEMBLY, HOSE	
405	57730475	1	ASSEMBLY, HOSE	
406	57694861	1	ASSEMBLY, HOSE	
407	56954167	1	ASSEMBLY, HOSE	
408	57694879	1	ASSEMBLY, HOSE	
409	56953151	1	ASSEMBLY, HOSE	
410	57694887	1	ASSEMBLY, HOSE	
411	56948755	1	ASSEMBLY, HOSE	
412	57694929	1	ASSEMBLY, HOSE	
413	56992068	1	ASSEMBLY, HOSE	
414	57694937	1	ASSEMBLY, HOSE	
415	57694945	1	ASSEMBLY, HOSE	
417	57137986	1	ASSEMBLY, HOSE	
425	57005647	1	ASSEMBLY, HOSE	
426	57714743	1	ASSEMBLY, HOSE	
427	57714750	1	ASSEMBLY, HOSE	
429	57714768	1	ASSEMBLY, HOSE	
430	57714776	1	ASSEMBLY, HOSE	
431	56964331	1	ASSEMBLY, HOSE	
432	95313961	1	ASSEMBLY, HOSE	
433	95313961	1	ASSEMBLY, HOSE	
434	95940813	1	ASSEMBLY, HOSE	
435	95371449	1	ASSEMBLY, HOSE	
436	52325255	1	ASSEMBLY, HOSE	
437	51916443	1	ASSEMBLY, HOSE	
438	51867919	1	ASSEMBLY, HOSE	
439	51300549	1	ASSEMBLY, HOSE	
441	51916401	1	ASSEMBLY, HOSE	
442	51916005	1	ASSEMBLY, HOSE	
443	57730483	1	ASSEMBLY, HOSE	
444	52325255	1	HOSE, PRESSURE TEST	
445	57097909	1	ASSEMBLY, HOSE	
446	56957798	1	ASSEMBLY, HOSE	
447	58051210	1	ASSEMBLY, HOSE	
448	56970635	1	ASSEMBLY, HOSE	
449	57734238	1	ASSEMBLY, HOSE	

57693947 AIR/OIL/WATER SCHEMATIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
451	52318011	1	ASSEMBLY, HOSE	
452	52325255	1	HOSE, PRESSURE TEST	
453	52325255	1	HOSE, PRESSURE TEST	
454	57704082	1	ASSEMBLY, HOSE	
455	51028777	1	ASSEMBLY, HOSE	
456	57711137	1	ASSEMBLY, HOSE	
457	51060143	1	ASSEMBLY, HOSE	
458	57044521	1	ASSEMBLY, HOSE	
459	57044521	1	ASSEMBLY, HOSE	


FRAME
BULKHEAD
507
OIL
DRAIN
INJECTOR
OVERFLOW
FUEL
PUMP
NEAR WATER PUMP
HEATER HOSE
VENT PORT
HEATER HOSE
(TOP OF ENGINE)
ENGINE
BLOCK
OIL FILTER
MANIFOLD
WATER
PUMP
IN
OUT
512
OUT TOP
CAB
HEATER
IN BOTTOM
517
513
503
508
506
502
517
504
IN
WATER
CONDITIONER
FILTER
510
515
516
SURGE TANK
IN
FUEL
TANK
509
OUT
IN
OUT
FUEL
COOLER
LUBE OIL
FILTER
514
TEE
OUT
IN
OUT
IN
501
OUT
SEPARATOR
FILTER
RADIATOR
57660011_02

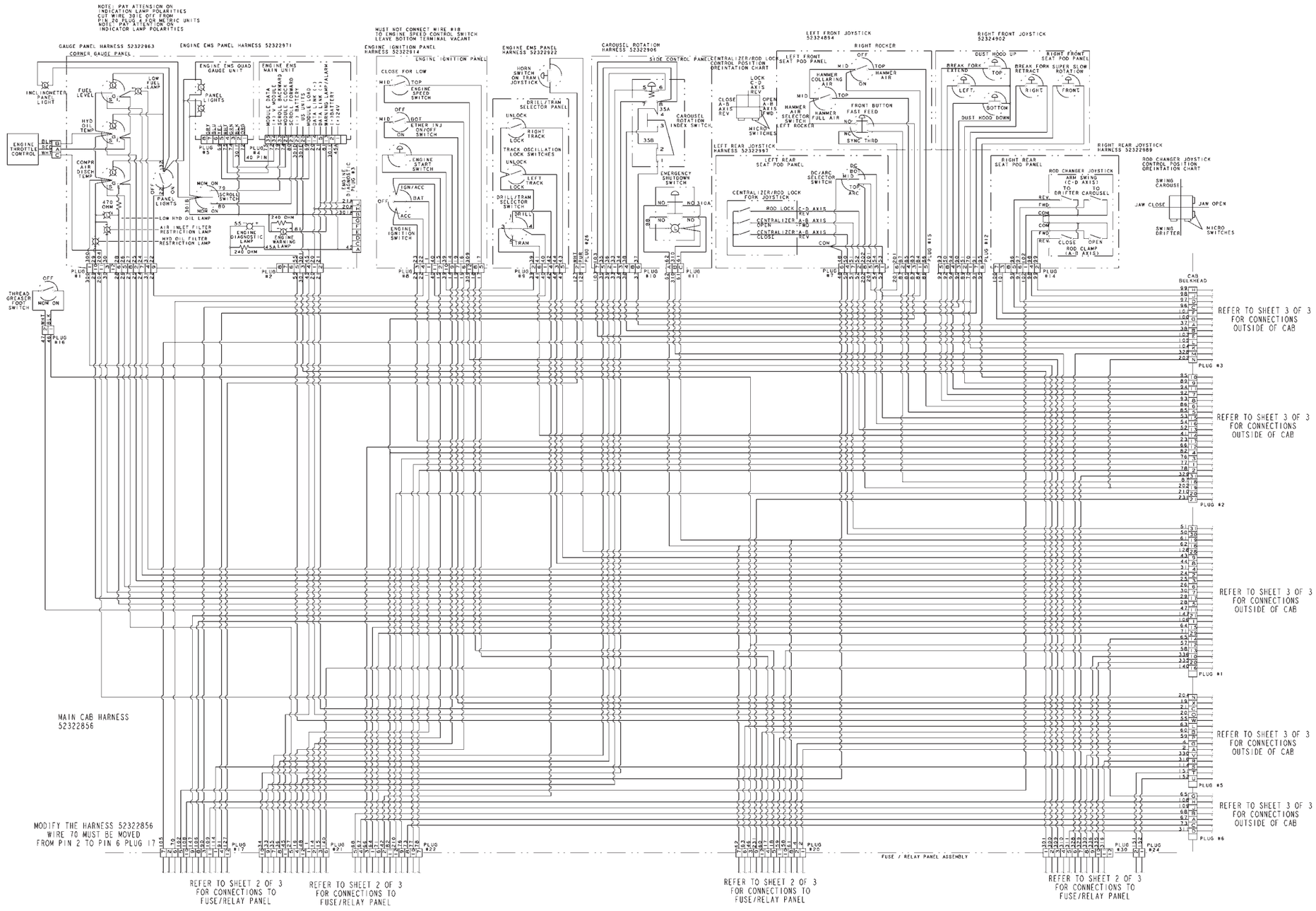
WARNING: This manual contains data SPECIFIC to Crawler Drilling Machine Model CM780D.

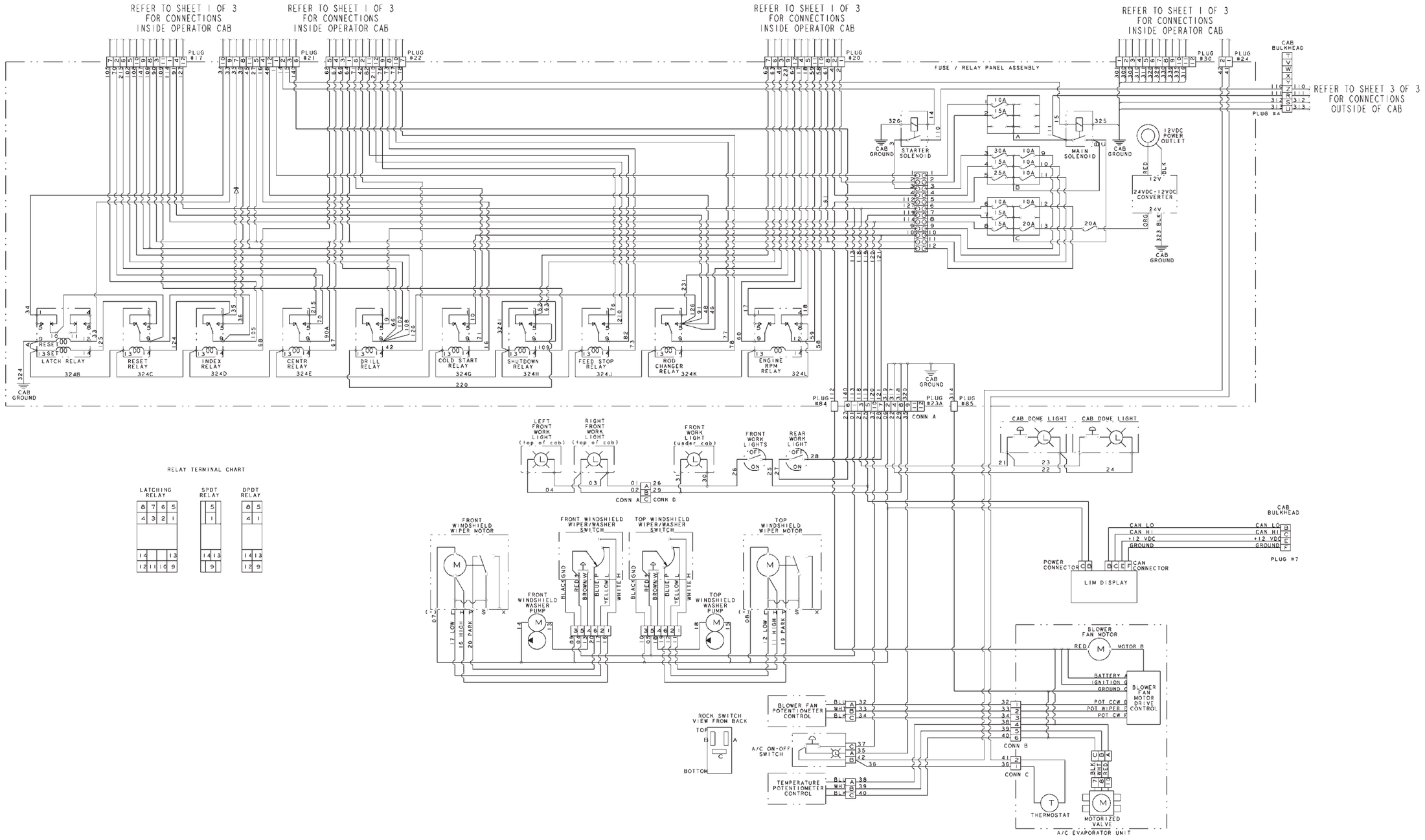
57660011 HOSES, ENGINE SCHEMATIC

REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
501	57450660	1	ASSEMBLY, HOSE	
502	52320413	1	ASSEMBLY, HOSE	
503	52320421	1	ASSEMBLY, HOSE	
504	51306934	1	ASSEMBLY, HOSE	
506	52320439	1	ASSEMBLY, HOSE	
507	52320447	1	ASSEMBLY, HOSE	
508	52325107	1	ASSEMBLY, HOSE	
509	52325115	1	ASSEMBLY, HOSE	
510	52320504	1	ASSEMBLY, HOSE	
512	52324704	1	ASSEMBLY, HOSE	
513	52324696	1	ASSEMBLY, HOSE	
514	52325099	1	ASSEMBLY, HOSE	
515	52320512	1	ASSEMBLY, HOSE	
516	56953987	1	ASSEMBLY, HOSE	
517	51713451	2	FITTING, SOCKETLESS	

57660011 HOSES, ENGINE SCHEMATIC

52330628 ELECTRICAL SCHEMATIC





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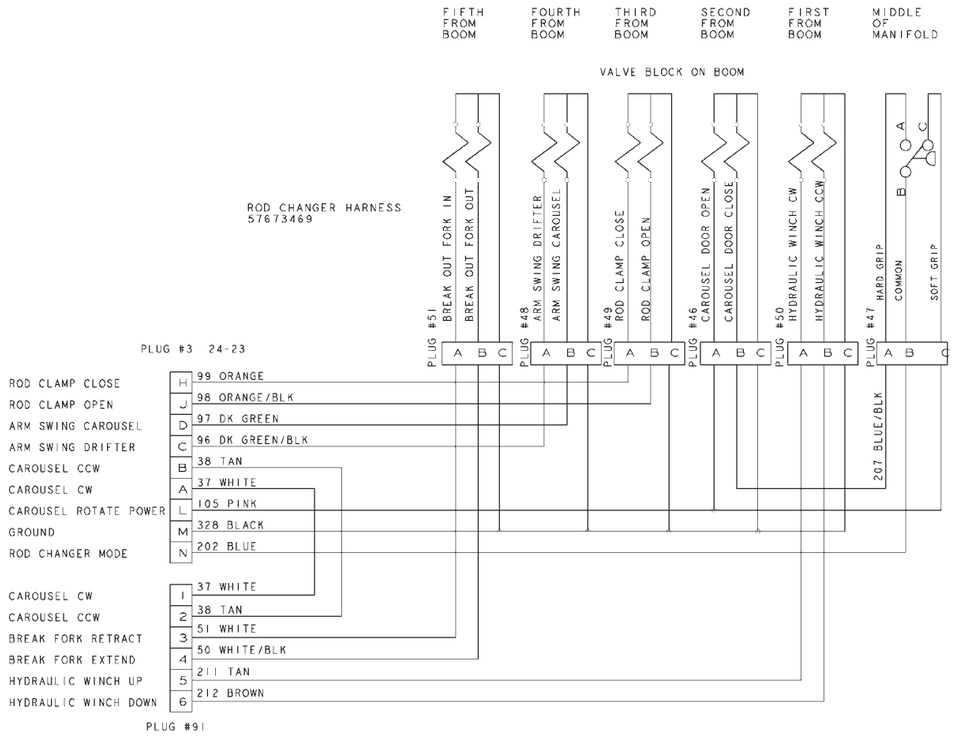
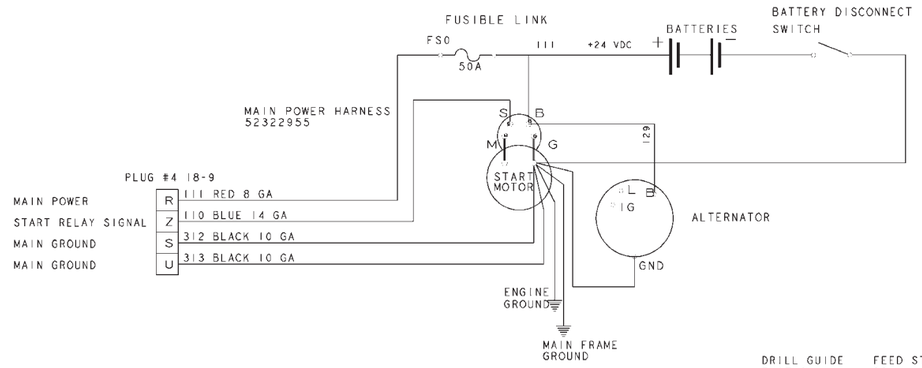
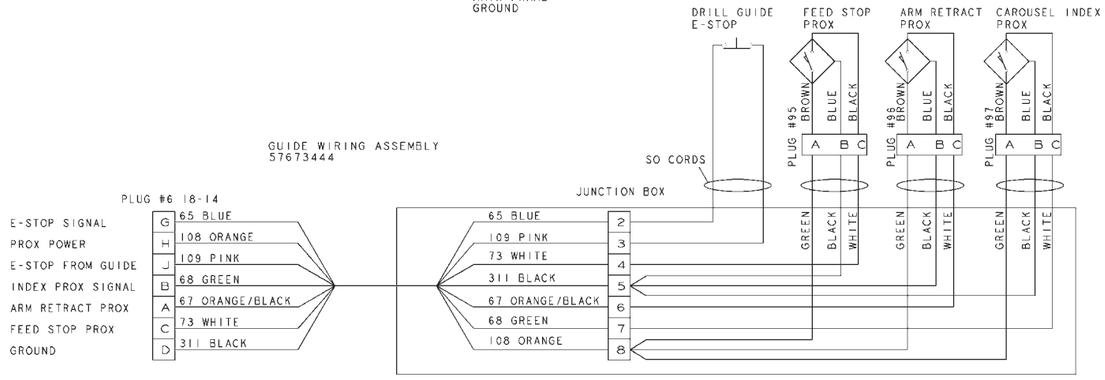
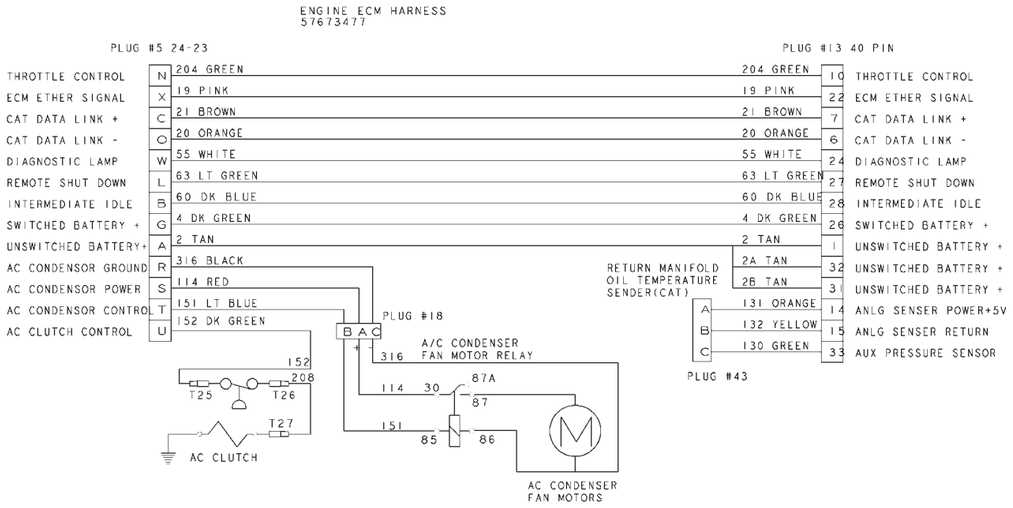
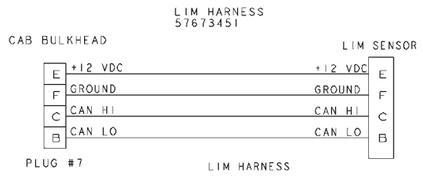
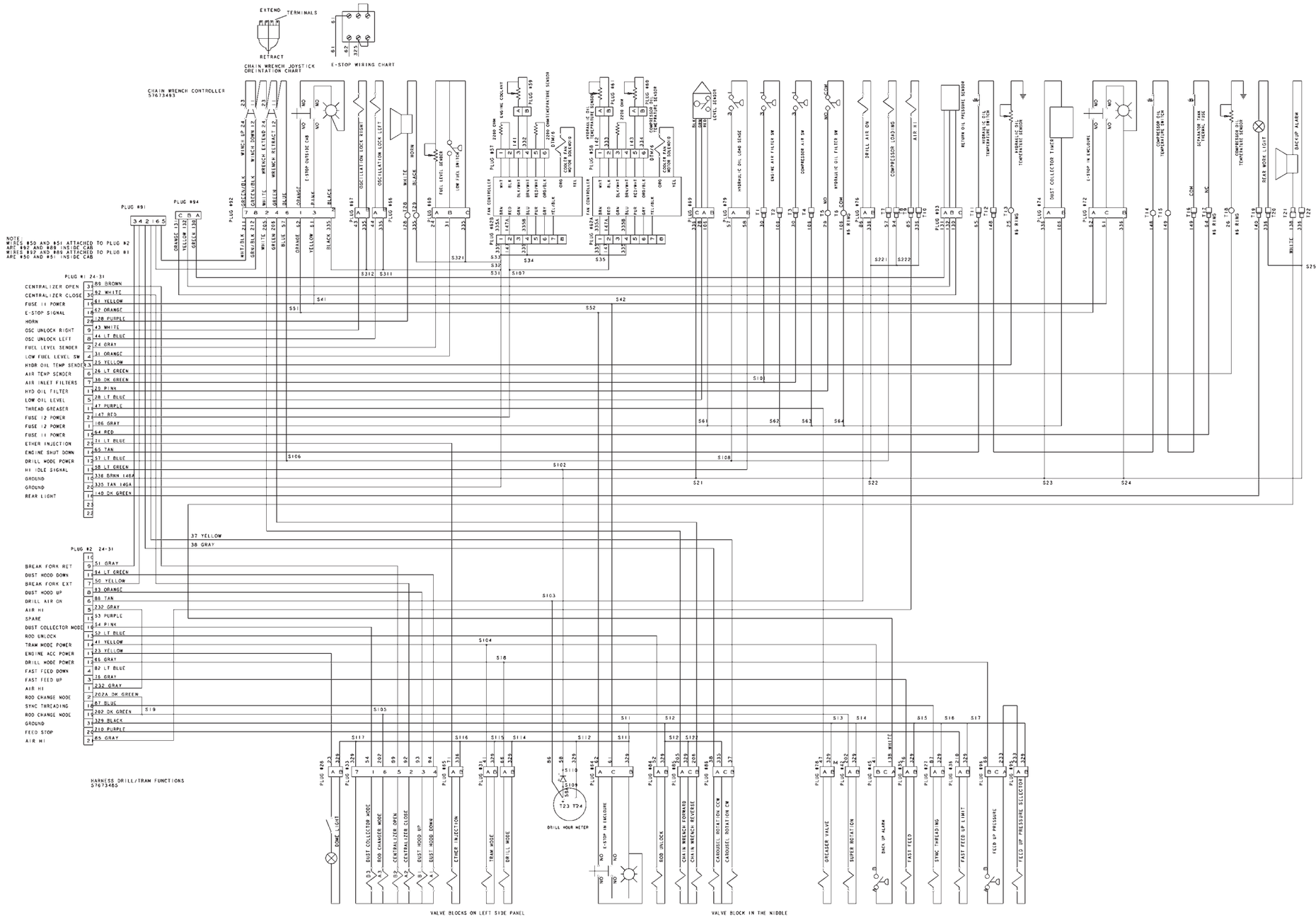

FIFTH FROM BOOM
FOURTH FROM BOOM
THIRD FROM BOOM
SECOND FROM BOOM
FIRST FROM BOOM
MIDDLE OF MANIFOLD
VALVE BLOCK ON BOOM
ROD CHANGER HARNESS
57673469
PLUG #51 BREAK OUT FORK IN
BREAK OUT FORK OUT
PLUG #48 ARM SWING DRIFTER
ARM SWING CAROUSEL
PLUG #49 ROD CLAMP CLOSE
ROD CLAMP OPEN
PLUG #46 CAROUSEL DOOR OPEN
CAROUSEL DOOR CLOSE
PLUG #50 HYDRAULIC WINCH CW
HYDRAULIC WINCH CCW
PLUG #47 HARD GRIP
COMMON
SOFT GRIP
207 BLUE/BLK
PLUG #3 24-23
ROD CLAMP CLOSE H 99 ORANGE
ROD CLAMP OPEN J 98 ORANGE/BLK
ARM SWING CAROUSEL D 97 DK GREEN
ARM SWING DRIFTER C 96 DK GREEN/BLK
CAROUSEL CCW B 38 TAN
CAROUSEL CW A 37 WHITE
CAROUSEL ROTATE POWER L 105 PINK
GROUND M 328 BLACK
ROD CHANGER MODE N 202 BLUE
CAROUSEL CW 1 37 WHITE
CAROUSEL CCW 2 38 TAN
BREAK FORK RETRACT 3 51 WHITE
BREAK FORK EXTEND 4 50 WHITE/BLK
HYDRAULIC WINCH UP 5 211 TAN
HYDRAULIC WINCH DOWN 6 212 BROWN
PLUG #91


FUSIBLE LINK
FS0
50A
111
+24 VDC
BATTERIES
BATTERY DISCONNECT SWITCH
MAIN POWER HARNESS
52322955
PLUG #4 18-9
MAIN POWER R 111 RED 8 GA
START RELAY SIGNAL Z 110 BLUE 14 GA
MAIN GROUND S 312 BLACK 10 GA
MAIN GROUND U 313 BLACK 10 GA
START MOTOR
ALTERNATOR
ENGINE GROUND
MAIN FRAME GROUND


GUIDE WIRING ASSEMBLY
57673444
DRILL GUIDE E-STOP
FEED STOP PROX
ARM RETRACT PROX
CAROUSEL INDEX PROX
PLUG #95
PLUG #96
PLUG #97
BROWN
BLUE
BLACK
SO CORDS
JUNCTION BOX
PLUG #6 18-14
E-STOP SIGNAL G 65 BLUE
PROX POWER H 108 ORANGE
E-STOP FROM GUIDE J 109 PINK
INDEX PROX SIGNAL B 68 GREEN
ARM RETRACT PROX A 67 ORANGE/BLACK
FEED STOP PROX C 73 WHITE
GROUND D 311 BLACK
65 BLUE 2
109 PINK 3
73 WHITE 4
311 BLACK 5
67 ORANGE/BLACK 6
68 GREEN 7
108 ORANGE 8
GREEN
BLACK
WHITE


ENGINE ECM HARNESS
57673477
PLUG #5 24-23
PLUG #113 40 PIN
THROTTLE CONTROL N 204 GREEN 204 GREEN 10 THROTTLE CONTROL
ECM ETHER SIGNAL X 19 PINK 19 PINK 22 ECM ETHER SIGNAL
CAT DATA LINK + C 21 BROWN 21 BROWN 7 CAT DATA LINK +
CAT DATA LINK - O 20 ORANGE 20 ORANGE 6 CAT DATA LINK -
DIAGNOSTIC LAMP W 55 WHITE 55 WHITE 24 DIAGNOSTIC LAMP
REMOTE SHUT DOWN L 63 LT GREEN 63 LT GREEN 27 REMOTE SHUT DOWN
INTERMEDIATE IDLE B 60 DK BLUE 60 DK BLUE 28 INTERMEDIATE IDLE
SWITCHED BATTERY + G 4 DK GREEN 4 DK GREEN 26 SWITCHED BATTERY +
UNSWITCHED BATTERY+ A 2 TAN 2 TAN 1 UNSWITCHED BATTERY +
AC CONDENSOR GROUND R 316 BLACK 2A TAN 32 UNSWITCHED BATTERY +
AC CONDENSOR POWER S 114 RED 2B TAN 31 UNSWITCHED BATTERY +
AC CONDENSOR CONTROL T 151 LT BLUE
AC CLUTCH CONTROL U 152 DK GREEN
RETURN MANIFOLD OIL TEMPERATURE SENDER(CAT)
A 131 ORANGE 14 ANLG SENSER POWER+5V
B 132 YELLOW 15 ANLG SENSER RETURN
C 130 GREEN 33 AUX PRESSURE SENSOR
PLUG #43
PLUG #18
A/C CONDENSER FAN MOTOR RELAY
316
114
30
87A
87
151
85
86
152
208
T25
T26
T27
AC CLUTCH
AC CONDENSER FAN MOTORS


LIM HARNESS
57673451
CAB BULKHEAD
LIM SENSOR
+12 VDC E +12 VDC E
GROUND F GROUND F
CAN HI C CAN HI C
CAN LO B CAN LO B
PLUG #7
LIM HARNESS



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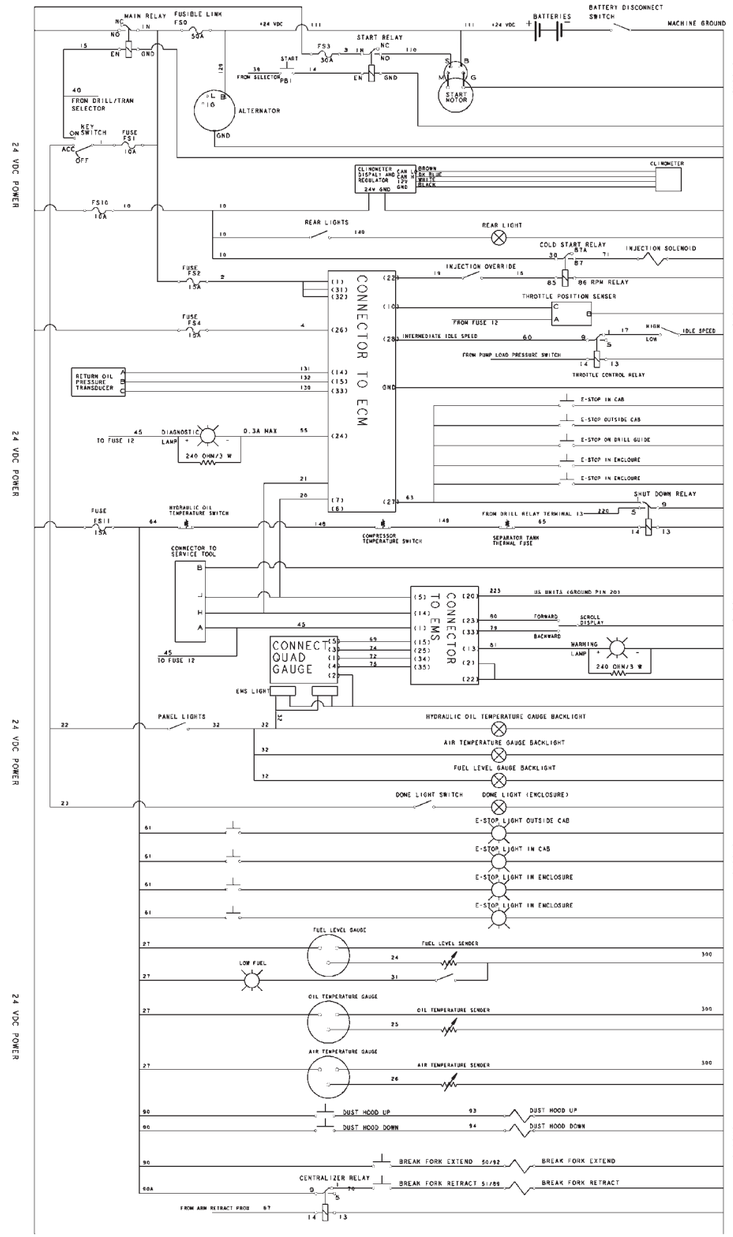
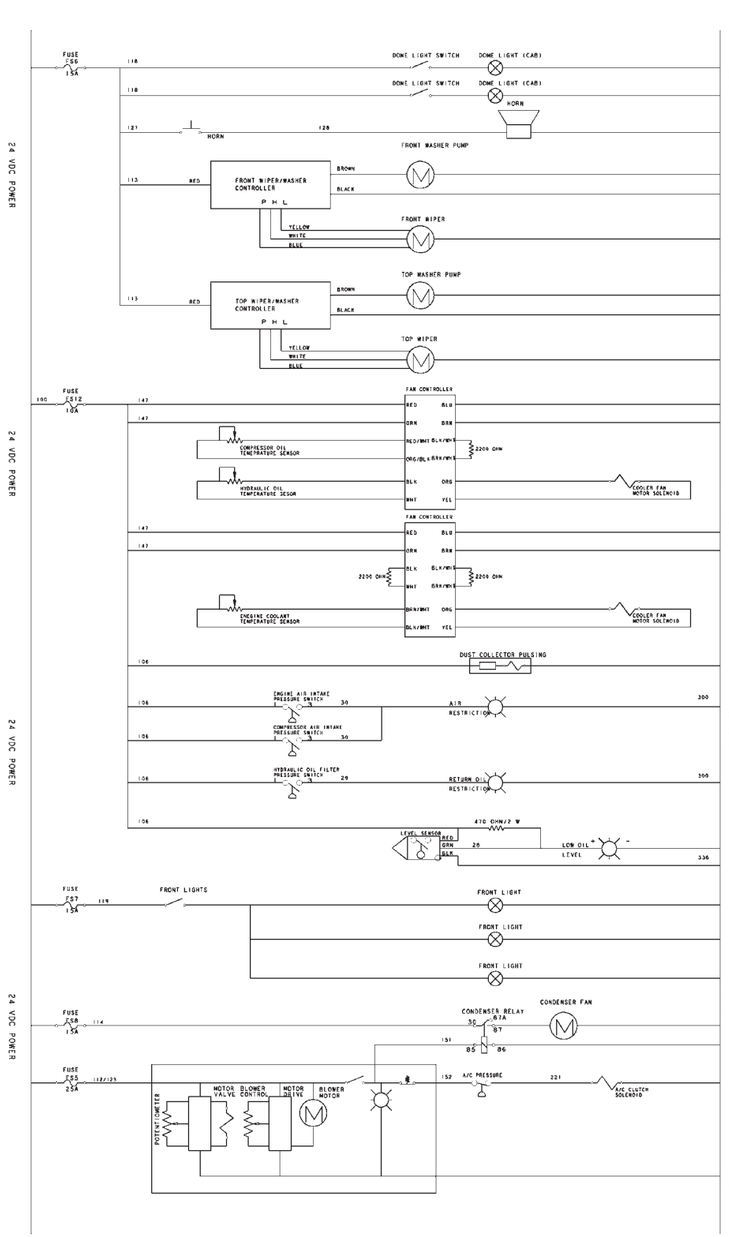
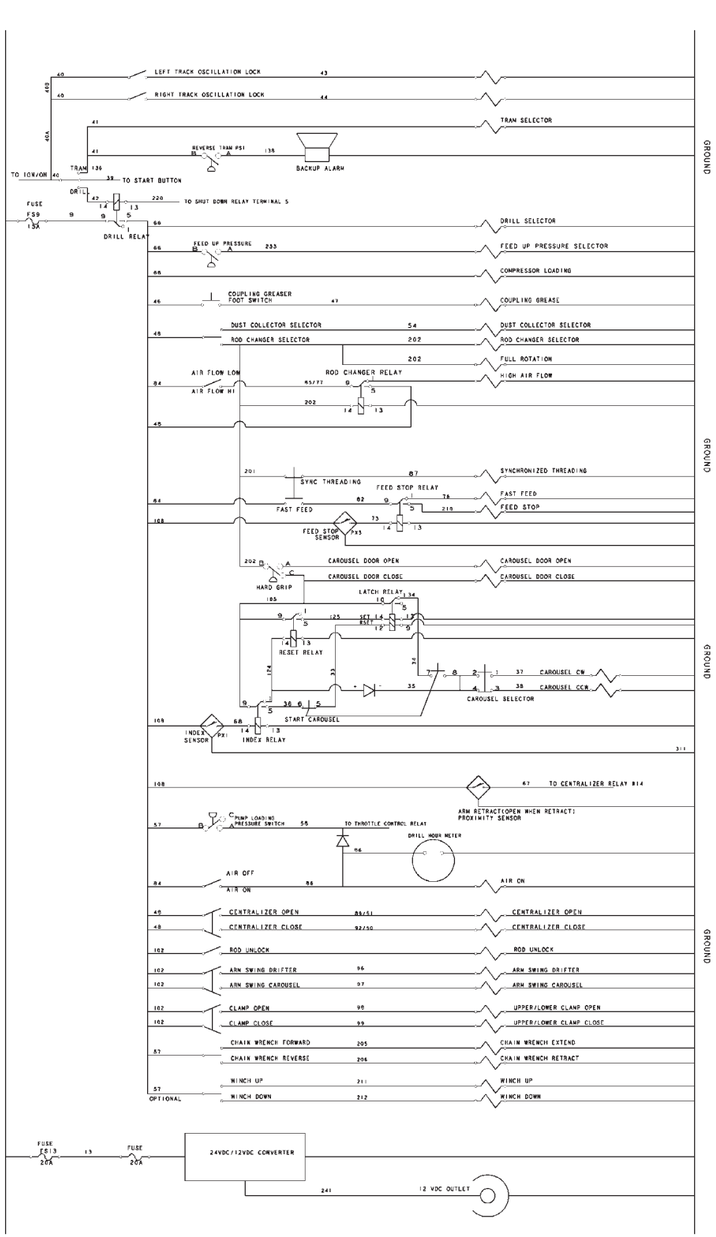
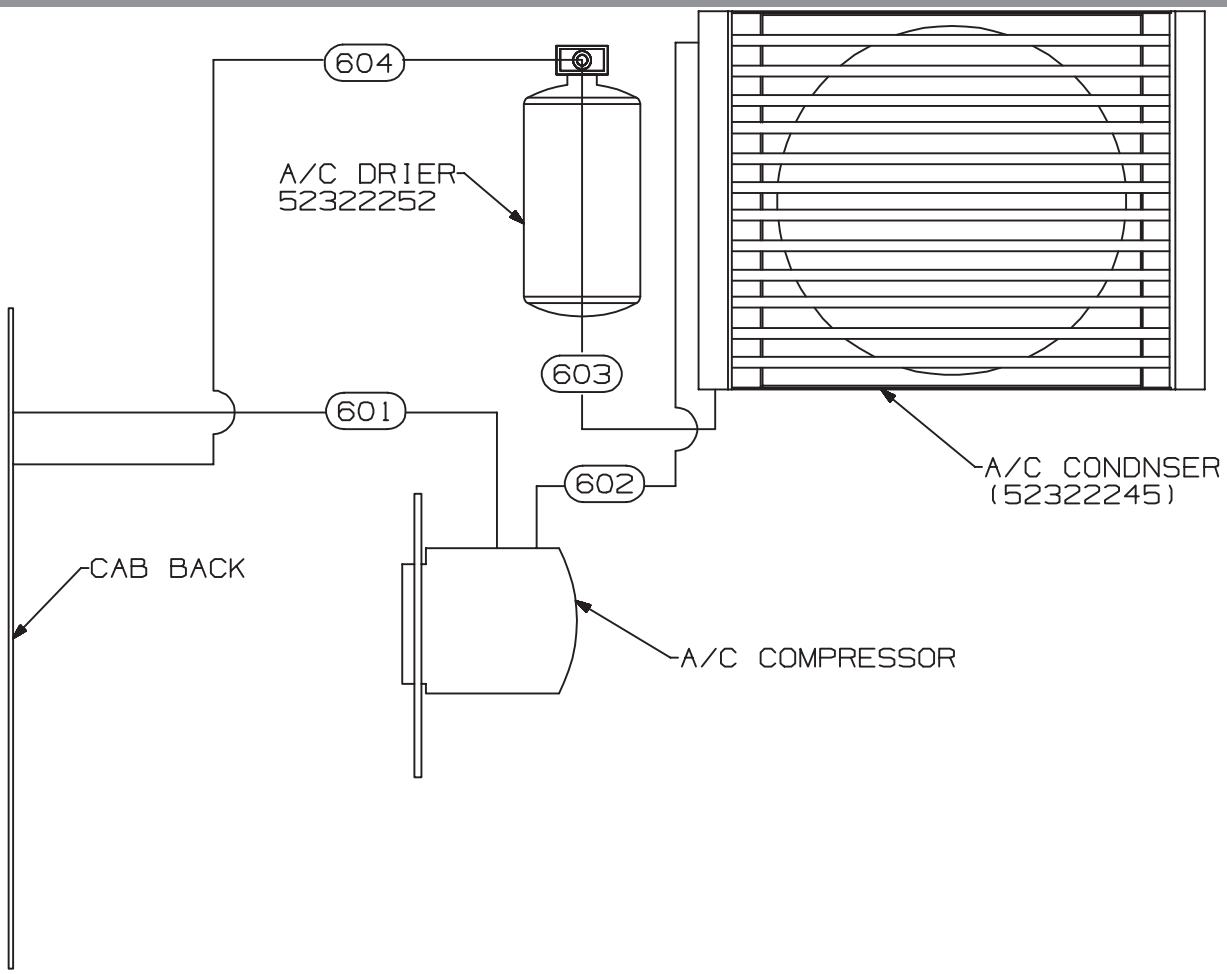

MAIN RELAY
FUSIBLE LINK
BATTERIES
BATTERY DISCONNECT SWITCH
MACHINE GROUND
START RELAY
ALTERNATOR
START MOTOR
KEY ON SWITCH
CLINOMETER
REAR LIGHTS
REAR LIGHT
COLD START RELAY
INJECTION SOLENOID
INJECTION OVERRIDE
86 RPM RELAY
THROTTLE POSITION SENSER
IDLE SPEED
THROTTLE CONTROL RELAY
CONNECTOR TO ECM
E-STOP IN CAB
E-STOP OUTSIDE CAB
E-STOP ON DRILL GUIDE
E-STOP IN ENCLOSURE
SHUT DOWN RELAY
HYDRAULIC OIL TEMPERATURE SWITCH
COMPRESSOR TEMPERATURE SWITCH
SEPARATOR TANK THERMAL FUSE
CONNECTOR TO SERVICE TOOL
CONNECTOR
CONNECT QUAD GAUGE
PANEL LIGHTS
HYDRAULIC OIL TEMPERATURE GAUGE BACKLIGHT
AIR TEMPERATURE GAUGE BACKLIGHT
FUEL LEVEL GAUGE BACKLIGHT
DOME LIGHT (ENCLOSURE)
E-STOP LIGHT OUTSIDE CAB
E-STOP LIGHT IN CAB
E-STOP LIGHT IN ENCLOSURE
E-STOP LIGHT IN ENCLOSURE
FUEL LEVEL GAUGE
FUEL LEVEL SENDER
LOW FUEL
OIL TEMPERATURE GAUGE
OIL TEMPERATURE SENDER
AIR TEMPERATURE GAUGE
AIR TEMPERATURE SENDER
DUST HOOD UP
DUST HOOD DOWN
BREAK FORK EXTEND
BREAK FORK RETRACT
CENTRALIZER RELAY
WARNING LAMP
DIAGNOSTIC LAMP
RETURN OIL PRESSURE TRANSDUCER
GROUND
24 VDC POWER


DOME LIGHT SWITCH
DOME LIGHT (CAB)
HORN
FRONT WASHER PUMP
FRONT WIPER/WASHER CONTROLLER
FRONT WIPER
TOP WASHER PUMP
TOP WIPER/WASHER CONTROLLER
TOP WIPER
FAN CONTROLLER
COMPRESSOR OIL TEMPERATURE SENSOR
HYDRAULIC OIL TEMPERATURE SENSOR
COOLER FAN MOTOR SOLENOID
ENGINE COOLANT TEMPERATURE SENSOR
DUST COLLECTOR PULSING
ENGINE AIR INTAKE PRESSURE SWITCH
COMPRESSOR AIR INTAKE PRESSURE SWITCH
AIR RESTRICTION
HYDRAULIC OIL FILTER PRESSURE SWITCH
RETURN OIL RESTRICTION
LEVEL SENSOR
LOW OIL LEVEL
FRONT LIGHTS
FRONT LIGHT
CONDENSER RELAY
CONDENSER FAN
MOTOR BLOWER VALVE CONTROL
MOTOR DRIVE
BLOWER MOTOR
POTENTIOMETER
A/C PRESSURE
A/C CLUTCH SOLENOID
GROUND
24 VDC POWER


LEFT TRACK OSCILLATION LOCK
RIGHT TRACK OSCILLATION LOCK
TRAM SELECTOR
REVERSE TRAM PS1
BACKUP ALARM
TO IGN/ON
TO START BUTTON
TO SHUT DOWN RELAY TERMINAL 5
DRILL RELAY
DRILL SELECTOR
FEED UP PRESSURE
FEED UP PRESSURE SELECTOR
COMPRESSOR LOADING
COUPLING GREASER FOOT SWITCH
COUPLING GREASE
DUST COLLECTOR SELECTOR
ROD CHANGER SELECTOR
ROD CHANGER RELAY
FULL ROTATION
HIGH AIR FLOW
AIR FLOW LOW
AIR FLOW HI
SYNC THREADING
SYNCHRONIZED THREADING
FEED STOP RELAY
FAST FEED
FEED STOP
FEED STOP SENSOR
CAROUSEL DOOR OPEN
CAROUSEL DOOR CLOSE
HARD GRIP
LATCH RELAY
RESET RELAY
CAROUSEL CW
CAROUSEL CCW
CAROUSEL SELECTOR
START CAROUSEL
INDEX SENSOR
INDEX RELAY
TO CENTRALIZER RELAY #14
ARM RETRACT(OPEN WHEN RETRACT) PROXIMITY SENSOR
PUMP LOADING PRESSURE SWITCH
TO THROTTLE CONTROL RELAY
DRILL HOUR METER
AIR OFF
AIR ON
CENTRALIZER OPEN
CENTRALIZER CLOSE
ROD UNLOCK
ARM SWING DRIFTER
ARM SWING CAROUSEL
CLAMP OPEN
CLAMP CLOSE
UPPER/LOWER CLAMP OPEN
UPPER/LOWER CLAMP CLOSE
CHAIN WRENCH FORWARD
CHAIN WRENCH REVERSE
CHAIN WRENCH EXTEND
CHAIN WRENCH RETRACT
WINCH UP
WINCH DOWN
OPTIONAL
24VDC/12VDC CONVERTER
12 VDC OUTLET
GROUND
24 VDC POWER

57692147 HOSES, HEATER, A/C



REF. NO.	PART NO.	QTY.	PART NAME / REMARKS	SERIAL NO.
601	52320462	1	HOSE	
602	52320470	1	HOSE	
603	52320488	1	HOSE	
604	52320496	1	HOSE	

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Drilling Solutions
Garland, TX
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